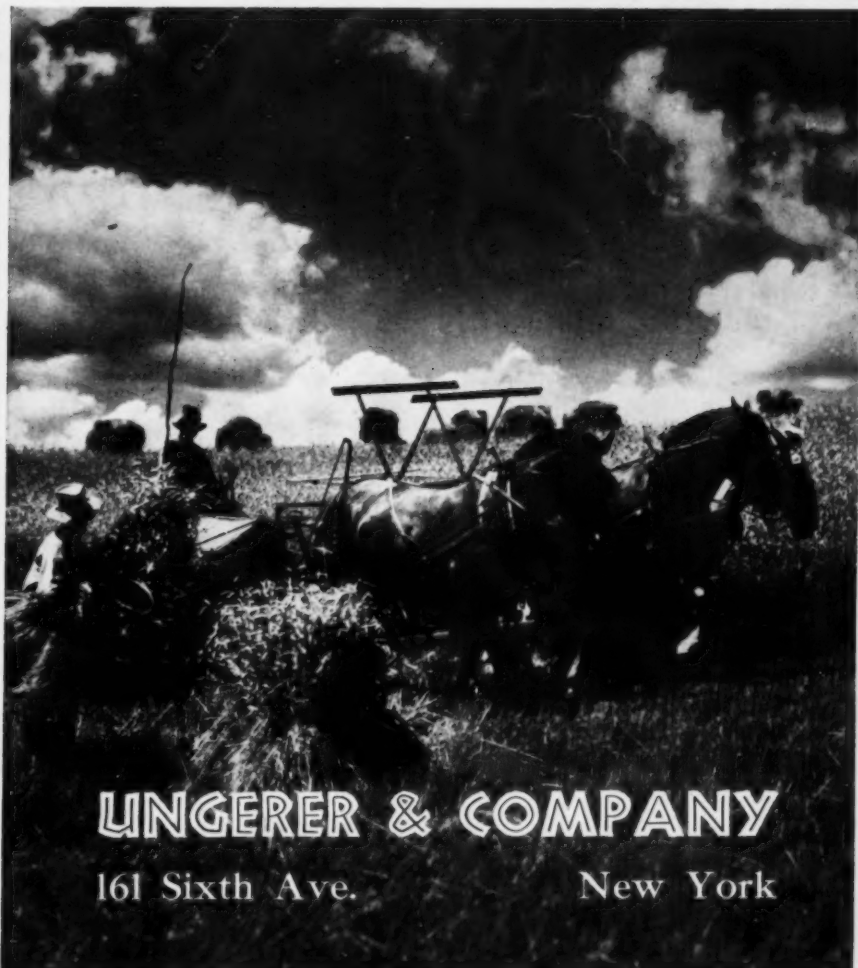
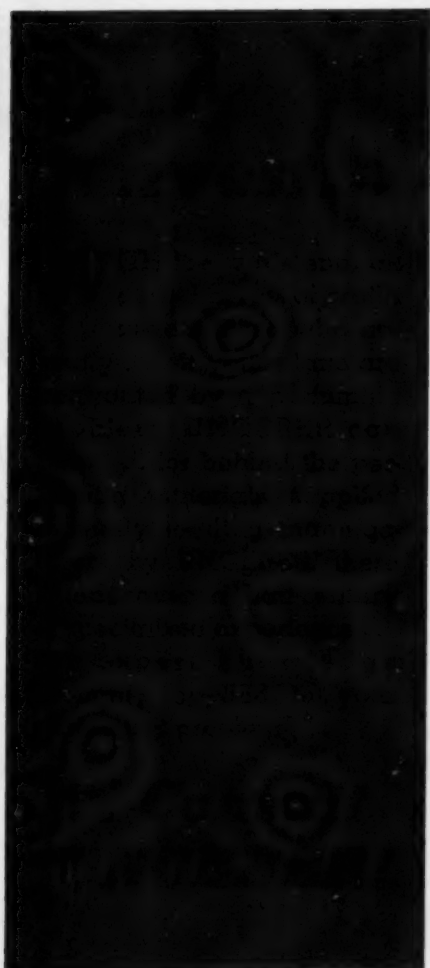


# SOAP

*and*

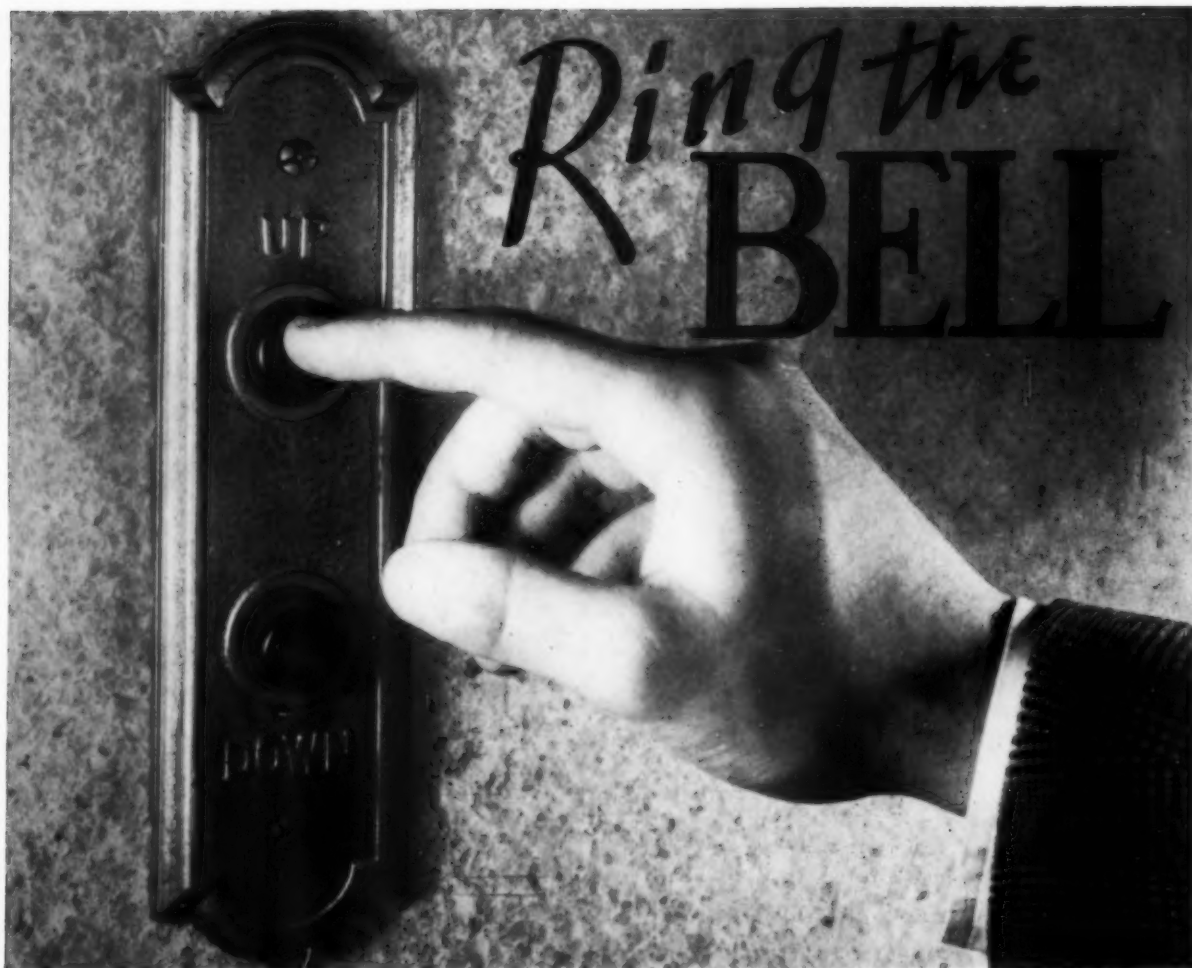
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favorite bouquets*



*we invite you to  
send for a sample*

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# SOAP

*and*

# SANITARY CHEMICALS

Volume XXI

Number Nine

September, 1945

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Published Monthly By

MAC NAIR-DORLAND COMPANY

254 West 31st, New York, N. Y.



Subscription rate, \$3.00 per year. Foreign, including Canadian, \$4.00. Copy closing dates—22nd of month preceding month of issue for reading matter and 10th of month preceding month of issue for display advertising. Reentered as second-class matter, Feb. 9, 1938, at Post Office, New York, under act of Mar. 3, 1879. Mail circulation Aug. 1945. 4240 copies. Total circulation 4350.

See How You Add Potent Sales Points —

**Make your household cleaner more useful**  
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With **QUADRAFOS** Dishpans, washtubs, bathtubs get no bacteria-harboring, hard-to-scrub ring. With **QUADRAFOS** Clothes washed free of soil, colors brightened — no greying redeposit — soap completely rinsed away. With **QUADRAFOS** Walls, floors, paint and tile come clean of fingerprints, grease and dirt without harm, without harsh abrasives. With **QUADRAFOS** Soap works harder, with half as much needed.

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\*container patents pending

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September, 1945

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A fresh



sh point-of-view  
on the aromatics picture...



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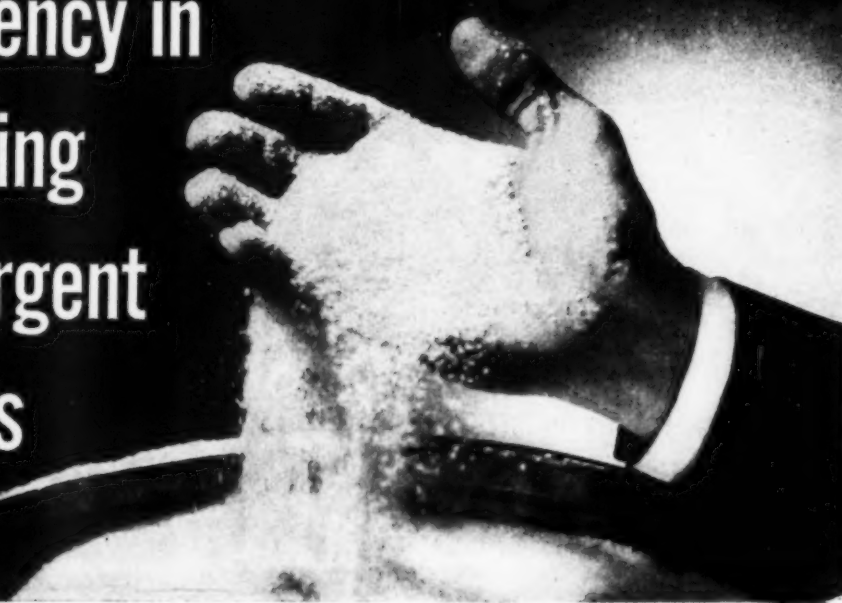
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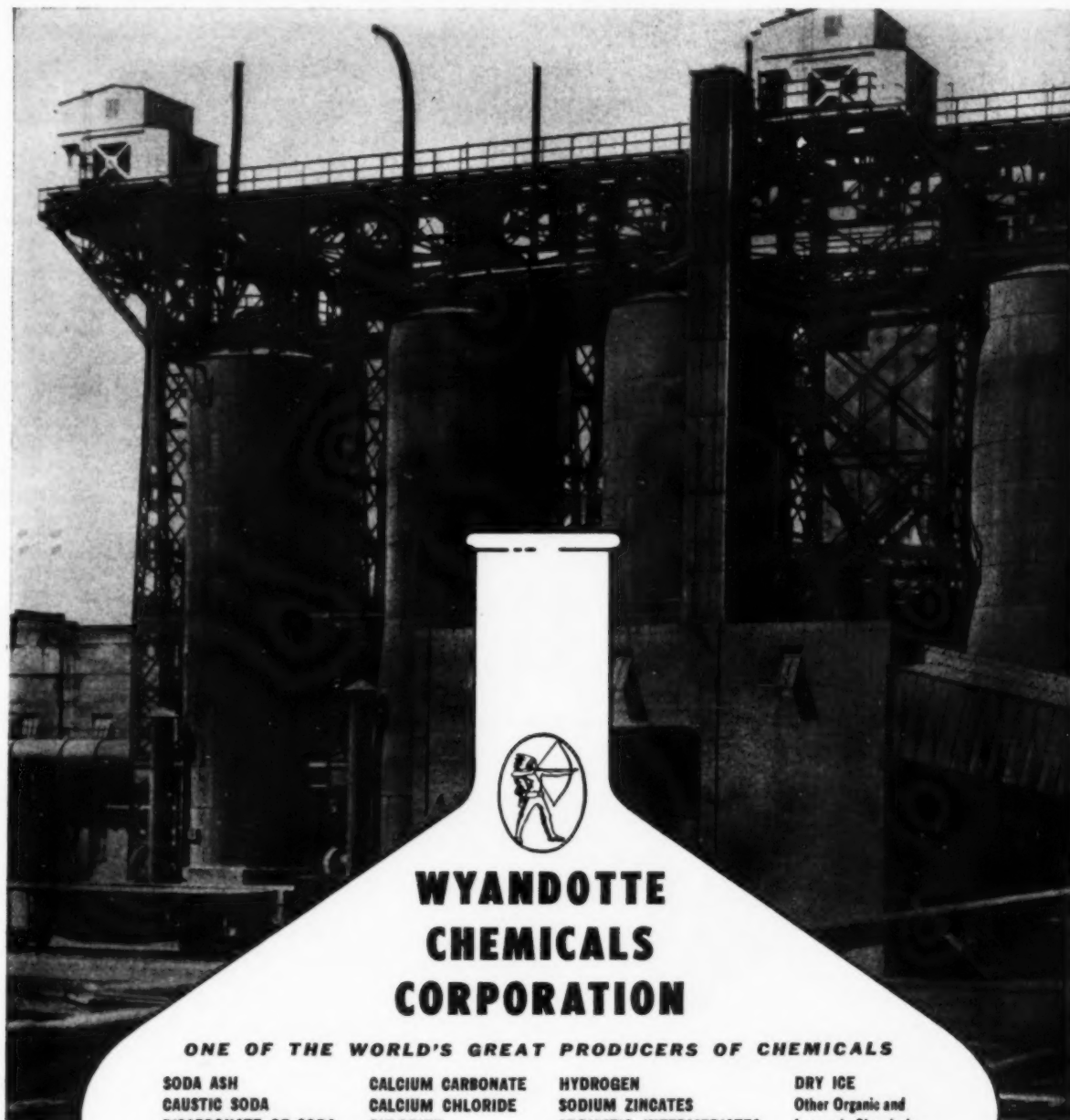
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and for the duration of the war—in addition to its regular circulation, INSTITUTIONS Magazine is being sent to buyers and specifiers of mass-housing and mass-feeding products for those engaged in the war effort.

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SPENDS  
\$45,000,000\*  
ANNUALLY**

**for WAXES, DISINFECTANTS, SOAPS,  
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**P**RESENT reduced supplies of natural floral essences emphasize the value of high quality substitutes. Synthetic floral essences can be used to replace the natural oils with full satisfaction and marked success in numerous products,—toilet soaps, shampoos, shaving creams, powders, creams, and many others.

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*Memorandum of Agreement....*

Between  
and **PHILADELPHIA QUARTZ COMPANY**  
Philadelphia 6, Pa. dated:

PHILADELPHIA QUARTZ COMPANY hereafter designated as Seller of and  
hereinafter designated as Buyer of Silicate of Soda, limitations, and conditions  
hereinafter set forth: , 194 , to the

**TERMS OF AGREEMENT** , 194 . This Agreement will not be resold  
for use in Buyer's

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**QUANTITY**

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ANNUAL (LBS.)	IN ANY ONE CALENDAR MONTH

SELLER'S BRAND

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P.Q.Y. 45  
SILICATE OF SODA

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September, 1945

Say you saw it in SOAP!

# Who's "Most Important" In the Hospital?

*Superintendent? Dietitian? Housekeeper?  
Directress of Nurses? Engineer?  
Maintenance Supervisor? Purchasing Agent?  
Pharmacist? Business Office Manager?  
Operating Room Supervisor? Chef?  
Laundry Head?  
Maternity Room Supervisor?*

There's no one good answer to that question. For in one hospital a certain department head may be the most important buying factor for one product and have little or no interest in another. In the next hospital the head of the department may rely on the purchasing agent; in still another the business manager or the superintendent may be the all-important individual to sell.

The point is that each sale to each hospital is an individual problem; the procedure that brought excellent results here may prove disastrous there.

And that's why advertising to this market is of such vital importance. Well-conceived advertising, aimed at selling everyone in the institution—which reaches all the possible buying factors—can produce results greatly out of proportion to its cost.

The best presentation of your story must necessarily be your job. Ours is to see that it reaches all the people who can influence results. For years our balanced editorial program of practical articles

and the best news service in the field has made HOSPITAL MANAGEMENT of real interest and value to all the management and administrative personnel. And in articles, correspondence and display advertising we have encouraged the routing of copies to all department heads, insuring deep penetration into the market and exceptionally broad coverage.

More than 75% of the hospitals where HOSPITAL MANAGEMENT is received route copies from one department head to another, making it certain that technicians whose advice must be sought are conditioned beforehand; insuring the fact that your story reaches all who are authorized to buy.

Join the hundreds of advertisers who are finding HOSPITAL MANAGEMENT the ideal medium for increasing their sales in this vast market. One of our representatives will be glad to give you the complete details of our remarkable story.



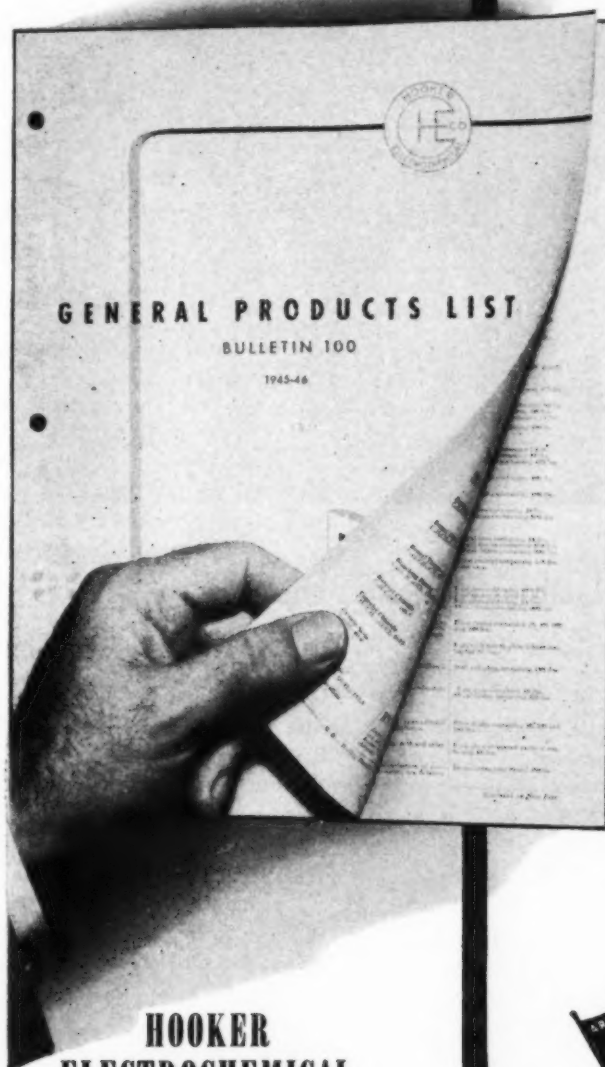
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DATA BOOK**  
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# Seven New Chemicals Have Been Added to Hooker's General Products List



## HOOKER ELECTROCHEMICAL COMPANY

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New York, N. Y. Tacoma, Wash.  
Wilmington, Calif.

Caustic Soda  
Paradichlorobenzene

Muriatic Acid  
Chlorine

Sodium Sulfide  
Sodium Sulfhydrate

September, 1945

Say you saw it in SOAP!

*What is the boiling range of Hooker Monochlorobenzene? What is the chlorine content of Hooker Sulfur Dichloride? Is Lauryl Chloride a liquid or solid and what are some of its uses? In what size containers is Hooker Cyclohexanol shipped?*

This is the type of information you will find in the new edition of the Hooker General Products List of nearly 100 Chemicals. Seven of these are new developments making their first appearance among the other Hooker Products.

A copy of this new bulletin which gives descriptions, principal specifications, uses and shipping information will save you time and trouble in selecting chemicals for your requirements.

When in need of chemicals, make it a habit to look at the Hooker General Products List. In that way you can be sure of the uniform high quality and purity that have been pleasing users for years. Technical Data Sheets and samples of products in which you are interested will be sent on request. Our Technical Staff will be glad to assist in the application of chemicals to your particular problems.

Take the first step in getting acquainted with Hooker by sending for this new edition of our General Products List.

Just type your name and "Bulletin 100" on your letterhead and a copy will be sent to you.



# HOOKER CHEMICALS

8323



Official U.S. Navy Photograph

## Columbia keeps its fleets of Chlorine and Caustic Cars



# IN ACTION!

One of the highly important factors in our Navy's successes has been the maintenance of the various fleets at sea for an extraordinarily high percentage of time. Officers fly back to bases in advance of their fleet's return, for example, to assemble supplies for immediate loading.

Columbia, too, speeds the turnaround of its fleets of special cars. Inspection, reconditioning and loading are handled with all possible dispatch in order to increase the productivity of every car.

Customers and carriers have co-operated in speeding turnarounds and rolling up the miles for a most impressive record for these fleets. This continued teamwork, especially while demands on transportation facilities remain high, will be repaid in the delivery of greater volumes of these essential war supplies.

### Typical Records . . .

Chlorine Car PPGX 217—  
8,742 miles in delivering to eight different industries  
within 118 days.

Chlorine Car PPGX 223—  
8,639 miles in 98 days, also to 8 industries.

Caustic Car GATX 32934—  
12,615 miles in 140 days, 14 different industries.

Caustic Car GATX 32941—  
10,026 miles, delivering to 18 industries in 140 days.

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**depend on du pont**

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Whatever perfume problem you have, bring it to Du Pont. Our Aromatic chemists and perfumers have the "know how" you may need to help preserve any product's fine fragrance. You can always depend on Du Pont.



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“If we do say it ourselves, any dirt-stained floor which we happen to operate on with our razzle-dazzle offense is naturally a very clean item in a touch less than a fraction. From this you might somehow get the idea that we think we are good.

Well... that is a true statement—after all, it is Scrubby, Moppy, Rinsey and Waxey with whom you are conversing. But it should also be known that our system functions best when copious amounts of those good Davies-Young supplies have been placed at our disposal by certain well-informed characters called ‘bosses.’ Hear that, boss? Better get Davies-Young today!”

**Buckeye Liquid Scrubbing Soap** is for use on all surfaces that require a neutral soap to clean. **Sani-Scrub** was developed particularly for cleaning rubber, rubber tile, asphalt tile, composition, mastic and cement. **Florex** is a balanced detergent, lower in soap content than Sani-Scrub. **No. 30** is a neutral concentrate 30% to 32% anhydrous. **Beamax** is most effective in developing a protective lustrous film on all types of floor surfaces, after the floors have been prepared by the *right* type of Liquid Scrubbing Soap.

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THE DAVIES-YOUNG SOAP CO.  
DAYTON, OHIO



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Offered in 2 concentrations:

These grades differ only in the amount of solids they contain.

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Packed in drums (55 gal., 30 gal.) or 10 gal. and 5 gal. cans.

Also available in small packages (4-1 gal. jugs to case)

## Dance Floor Wax:

A uniformly compounded, granulated wax. Makes a floor ideal for dancing by merely sprinkling from shaker top can and letting the dancers' feet do the polishing.

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Our paste wax is a concentration of the finest waxes and gives a thicker coating with one application. This wax is quick drying, buffs easily, is waterproof and commands a high lustre on either old or new floors.

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AND DISTRIBUTING  
EASTON, PENNSYLVANIA



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".....!"



"HEY, LADY. LOOK AT ME!"



"RIGHT HERE, MISTER!"

You'll need a package that talks. And there's nothing like Coated Lithwite to make it speak up and sell

ONE THING CERTAIN about tomorrow's stores...there's going to be *more* self-service, not less. *More* mass displays, not fewer. And that means a greater need than ever for packages that can out-talk competition at the point of sale.

Many a leading manufacturer has already discovered that cartons made of *Coated Lithwite*, the revolutionary, machine-coated paperboard, have a crispness and brilliance that get attention, make them speak out above competition. *Coated Lithwite* holds up colors with eyecatching brilliance, enables you to present a persuasive, "speaking likeness" of your product. And its velvet-smooth surface gives your package a look and feel that says there's *quality* inside.

As you plan your postwar packages, keep *Coated Lithwite* cartons in mind. The day is coming when Gardner-Richardson will again be able to accept orders for cartons made of this revolutionary machine-coated paperboard that turns "Silent Salesmen" into *talking* packages.

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Manufacturers of Folding Cartons and Boxboard  
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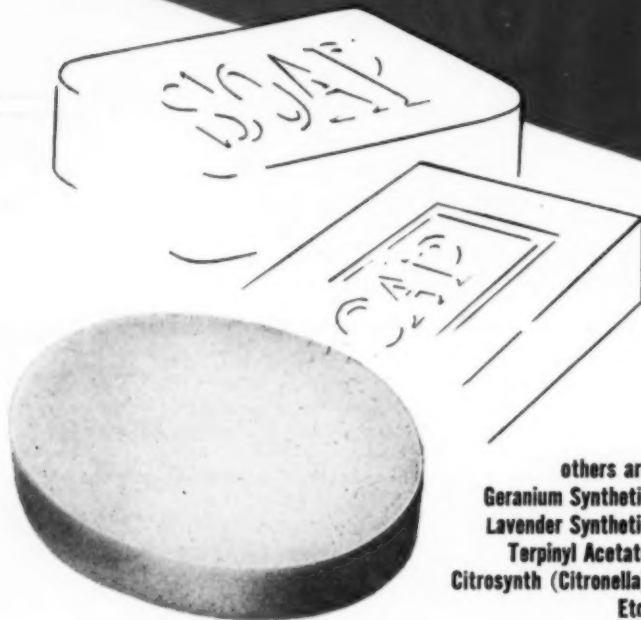


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There is no need for compromise with FLORASYNTH'S ESSENTIAL AROMATICS.

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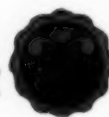
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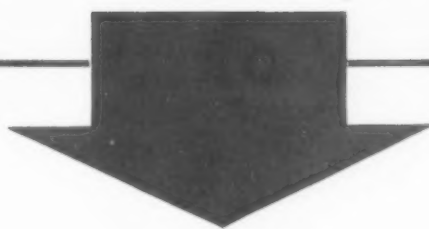
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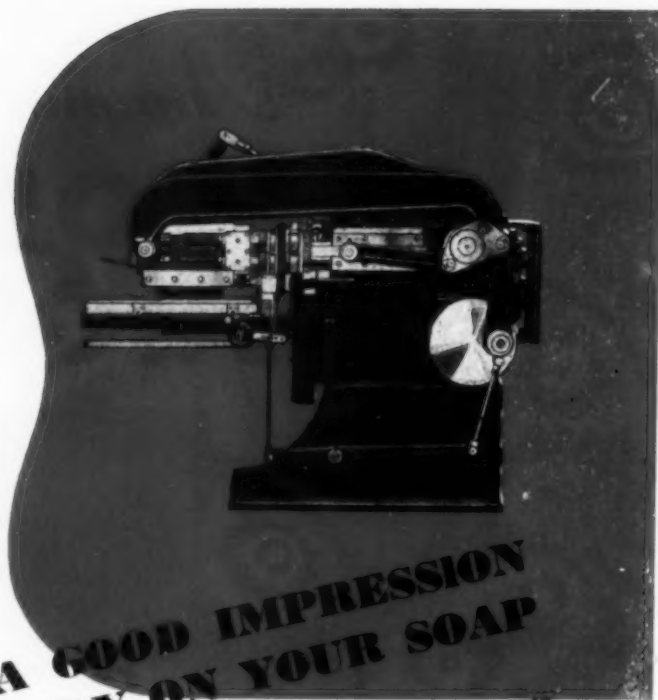
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The new, after-the-war world is already here. You will be at a disadvantage if you continue with outworn, obsolete presses that handicap the product you make. For full information on the Jones Toggle Operated Soap Press, write us today.

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# R. A. JONES AND COMPANY, INC.

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CINCINNATI, OHIO



WHILE the end of the war brings the elimination of some problems for the average soap manufacturer, his main problems, quota restrictions and the fat shortage, do not appear likely of solution for some months to come. Control of oils, fats, and soap output, needless to say, will not be terminated by USDA. There is no doubt but that the end of hostilities has to an unknown extent reduced the demand for soap and also for oils and fats for non-soap technical uses. Likewise, larger tonnages of rosin and tall oil should become available for the soap kettle. But will these be sufficient to make an impression on the present shortages? And if they do, will the 74 per cent quota figure be boosted promptly? Or will they be forced into ex-quota production? Recent increases in quotas of oils for paint and salad oil production are interpreted as a favorable sign.

General opinion among soapers and oil and fat operators is that conditions will show some improvement but not enough to permit a return to normal operations for another six months at least. Much depends upon the actions of USDA. Thus, the average soaper with no physical reconversion headaches of any moment is faced with continuing raw material and quota headaches.



WHEN will the present restrictions on civilian soap production in the form of a 74 per cent production quota be eased or removed? One form of opinion holds that USDA is going to hang on to control of oils and fats until the last drop of the hat, until stock piles of coconut and other oils become definitely surplus,

and until world food fat needs are all fully satisfied,—and that will be late in 1946. There are others who hazard the guess that with the war over, the American public, sick and tired of rationing and shortages, will demand soap and plenty of it. The heat applied to USDA via Congress, may, they feel, force the liberalization of domestic civilian soap output, irrespective of the need to supply food fats and soaps to devastated Europe and the Pacific.

Whichever guess is correct, we look for Congress, already reflecting a spirit of end-all-war-measures-now, really to cut and slash into what is left of the war program. Returning from vacations in their home districts knowing how really tired of war and high taxes the American people have become, Congress appears in a mood which bodes ill for any sort of governmental control over private business, no matter how necessary it may be. In a belligerent sweep to cut us loose quickly from all war legislation, soap controls may go sooner than expected.



COCONUT oil,—all eyes in the soap industry are focused on the Philippines and coconut oil. How long will it take before something akin to normal supplies begin flowing from the Islands to the American soap kettle? What about the 100,000,000 pound stockpile which the USDA is holding? And when Philippine coconut oil becomes available, will it come to the United States or go to Europe?

Elsewhere in this issue, this and kindred questions have been discussed in some detail. The opinions as given are based on the views of those with many

years of background in the oil and fat markets. They seem to agree that six months is about as short a time as may be expected before regular shipments of copra or oil have been organized. Repairing docks and other shipping facilities, obtaining bottoms, and other factors will require that time.

But when the oil is available, the chances are at the moment that most of it will come to the United States, although Ceylon and other Pacific coconut output may then go to Europe. Pressure to release a considerable portion of stockpiled coconut oil to soapers is reported being brought to bear on Washington. But the guess is that USDA will hang on to its supply until forced to disgorge in whole or in major part. There is also one other point of interest in coconut oil which may have a very direct bearing on how much of any produced in the Philippines will come to America. If they can make more money shipping to Europe or elsewhere, in spite of allocations from total world production, ceiling prices may be found to be a hindrance in practice if not in theory.



**F**EAR of USDA that glycerine stocks were shrinking too rapidly for safety ended with peace in the Pacific. Numerous war uses for glycerine have been terminated. Because there were in effect no government restrictions on sale or use, there have been none to remove. The situation which refiners have feared, a sudden end of hostilities with large stocks on hand, appears to have arrived. Although ordinary civilian uses for glycerine will probably show a continued heavy demand, present rate of glycerine production appears quite certain to reverse the downtrend in reserve stocks. In glycerine, the sellers' market has ended abruptly.

The cooperative efforts of recent years to expand the uses of glycerine, especially in new fields, has been difficult to

evaluate during the past four years of war. But the feeling appears general that it has been extremely valuable. Obviously, a continuation, preferably on an expanded basis, is indicated by good judgment. There is no substitute for glycerine!



**T**O provide more laundry soaps of one sort or another, USDA has been considering seriously for some time a sharp cut in toilet soap production. Although the proposal and its discussions in Washington have been of the usual secretive nature, ostensibly this time to avoid a "toilet soap panic," the figure mentioned for the cut is half of the present 74 per cent quota. This would bring toilet soap output down to slightly more than a third of normal output. Taking 1942 figures for all kinds of toilet soap at about 550,000,000 pounds, this would give about 200,000,000 pounds. If soapers have been operating at 74 per cent on toilet soaps, they have been of late producing at the rate of 400,000,000 pounds per annum. With current output of all forms of civilian laundry soaps something over two billion pounds, this would mean that 200,000,000 pounds of toilet soap, or less than ten per cent would be added to the laundry types.

The increase in the supply of laundry soaps would not be sufficient to warrant throwing such a bombshell into the toilet soap industry. That toilet soap manufacturers are fighting the proposal tooth and nail goes without saying. With the war over, the proposal may be abandoned, which is as it should be. Given a few months and a prompt adjustment of laundry soap quotas to better fat supplies, including freeing immediately a large portion of government vegetable oil stock piles, and the soap industry will work out a better and more practical solution of the laundry soap shortage than all the drastic government regulations in christendom.



## What's ahead for the SOAP INDUSTRY?

**W**ITH the war over, what conditions face the soap industry? Will the current stringent supplies of oils and fats continue, and for how long? With a let-up in soap needs for the armed forces and a cancellation of some contracts, will the present civilian production rate of 74 per cent be increased? The Department of Agriculture was invited to answer these questions for publication and at first agreed to do so. However, they later discovered that they must respectfully decline. It seems that in answering anything, or even speculating in the light of current evidence, in war or in peace,—and no matter how much guidance such speculation might be to numerous smaller firms,—members of the Department would be required to "stick their neck out." And this is one thing which no government official ever does.

The transition from war to peace reveals a two-sided picture for the average soaper. Physical reconversion of machinery and products will be unnecessary. Soapers will continue

to make essentially the same products with the same equipment which they have used throughout the war. Many important chemicals have been freed by WPB. The labor situation is less acute. That comprises the bright side of the picture.

On the other side, the end of the war found the oil and fat situation at its worst point in over two years. It found all soap fat supplies short, tallow and grease stocks down over sixty per cent from 1944 to the lowest point since June 30, 1943, little likelihood of any real tonnage of Philippine copra before 1946, and the flat prediction by oil and fat producers and traders that there would be no marked improvement before the middle of 1946. For the latter half of 1945, production of domestic oils and fats will be materially less than for the same period of 1944. General inventories of oils and fats in the U. S. as of September 1 were about one billion pounds less than a year ago, a drop of more than one-third. Tall oil and rosin even though war use has tended to ease somewhat with the end of hostilities are likely to remain restricted.

In copra and coconut oil particularly lies the hope of soapers for relief from a continuation of the fat shortage. Leading authorities, however, place April 1, 1946, as the date when stocks of copra will be coming in fair tonnage and in regular supply to the United States from the Philippines. Small shipments will dribble in between now and the end of the year, they state, with some slight increase after January 1. But to repair damaged Philippine shipping facilities, line up the bottoms to carry the cargo and to get the copra moving to American crushers will require over six months. Release of at least ten million pounds per month from the Government coconut oil stock pile of 100,000,000 pounds is held to be perfectly safe from now on, and the USDA is being urged to put this stock-piled oil to practical use *now* when it is needed and not hold it to throw on the market after the shortage has been relieved.

As for rosin for use in soaps, the belief has been expressed that it will continue scarce throughout the balance of this year and 1946. Inventory restrictions have permitted some



slight accumulations and the stock position is now somewhat better than it was. The possibility that the Government may increase allotments about 25 per cent to soap manufacturers to 55 per cent of total 1944 use is held to be not unlikely.

A general lifting of the war-time ban on chemicals will probably remove with some exceptions the difficulties in obtaining supplies which have heretofore existed. The restricted days in the supply of phosphates, silicates, soap-making alkalies, and other chemicals ended with the removal of WPB controls on Aug. 31. Cessation of numerous war production operations has freed large tonnages which have become available for general use. Chemicals are following a pattern characteristic of the general release of war-restricted materials to which oils and fats are and will continue to be an outstanding exception. Chemical prices are not likely to show any material change in the near future. Demand continues heavy, export inquiry showing a wide expansion.

In the case of wrappers, cartons, shipping cases and other paper products, there was the beginning of an easier situation even before the end of the war. Most of the tonnage of paper products of all sorts which has been going into war materials will revert now to general industrial use. A short time will undoubtedly be required to convert war production to civilian needs in packages, but with this accomplished, a wide improvement in supplies is likely. However, pulp supplies are still short and it may be well into 1946 before a condition akin to pre-war normal will return.

As far as fat salvage is concerned, the opinion in both the soap and rendering industries appears unanimous that greater pressure should be applied to the collection of waste fats rather than less during the coming six months. With hostilities ended, the difficulty in obtaining much-needed household waste fats will be increased. But the fats are needed as much as ever to speed the return to normal soap production. That the campaign will be continued at least until the middle of 1946 appears to be the only

valid decision in the light of present circumstances.

SO much for the general raw material situation which is not alone in posing war-end problems for the average soaper. In the matter of post-war civilian markets for finished soap products, there are two phases of the situation which stand out disadvantageously for old-line soap manufacturers. In the first place, the 74 per cent quota production figure, a lodestone about the neck of the industry from the beginning, outlived its usefulness,—if it ever had any,—the day the war ended. (Paint manufacturers, incidentally, have just had their oil use quotas increased.) The 10 per cent stretching order has by no means made a dent in the soap shortage. A continuation of the 74 per cent quota means only a further aggravation of an already bad situation in soap distribution channels.

If the 74 per cent quota is carried on for any time into the post-war period, soapers can only look for the development of chaotic conditions in their civilian markets. There is also the matter of competition from non-soap products—the second phase of the same situation—which the end of the war brings much closer to every soap producer. The 74 per cent soap production quota, if it is maintained, opens the door wide to non-soap products, gives them an opportunity to break into the market while soapers are unable to supply the normal demand for soaps. The release of some millions of pounds of synthetic detergents on Sept. 30 which heretofore has been going almost wholly for war uses, means that hundreds, and possibly thousands, of new detergent products may come on the market during the next few years. Where these are marketed by soap companies, it is one thing,—but where they represent new and outside competition from other industries, it is something further for soapers to worry about.

With the end of the war, old-fashioned soapers must revamp some of their thinking in terms of products and markets. This was pointed out here a year or more ago and is the

opinion of a number of close students of the industry. During the past three or four years, anybody could make and sell almost anything as long as it was labeled "soap." But another year will see that condition ended. The old stand-bys may find themselves outmoded by (1) new types of soap products which were getting well under way when the war started, (2) modified soaps of which the war-time salt water soaps are one example, and (3) wholly non-soap products based on any one of ten or more types of synthetic detergent. In the case of the latter, it would appear to be a case of soapers entering the field or permitting outsiders to present the threat of taking over a substantial segment of the markets for detergent products in the years to come.

While the current shortage of soaps, and oils and fats is a temporary problem which will probably be forgotten a year hence, the potential competition from a large war-developed tonnage of synthetic detergents is a problem of the long-range variety for the average soaper. The old-time soldier or politician or whoever it was who said some years ago: "If you can't lick 'em, jine 'em"—may have inadvertently had a word of advice applicable to the soap industry today as it faces a period of new post-war competition from non-soap products.

WHEN will the 74 per cent quota of fats and oils be raised? This is the question which apparently scared the Department of Agriculture officials half to death and which they view as a very "hot potato." On its answer depend many other questions and probabilities. Conversely, the answer depends on a number of other factors, particularly world needs for food fats and oils as well as domestic needs, the amount of soaps which will still be required by the armed forces, and the amount of soap, not to mention oils and fats, which will be allotted to UNRRA, the latter still a matter of speculation and something of a political football.

As it is viewed in some quarters, many new soap substitutes will be rushed to market to take advantage of



the present soap shortage. But, opinion adds, they will not amount to a drop in the bucket for a long time. They cannot be marketed and distributed fast enough actually to be of any immediate relief. As has been pointed out, the American market absorbs well over a quarter-billion pounds of soap per month which is quite a tonnage of any household material. When soaps become short enough, — and this is the case in some markets already, — the American public will squawk loud and long, more especially so with the war over and the release from rationing of so many products. The inevitable pressure on Congress is likely to come, holds one comment to the soap industry, and force the hand of the USDA, even though raising the soap quota figure be at the expense of UNRRA or our domestic food fat supply. Another guess is that this pressure is likely to come sooner than expected, possibly within the next month or so.

And while the subject of public pressure on Washington is being mentioned, note may also be made of the fact that pressure to cut the production of toilet soaps sharply below the 74 per cent quota figure and to divert this material to the production of the scarcer laundry soaps has been exerted strongly on the USDA for the past month or two. In fact, a behind-the-scenes battle is still being waged. Probably because toilet soaps are still on display in the stores,—observation in Washington,—and laundry chips, powders and bars have reached the former cigarette style of "under the counter," pressure from certain Congressional elements aims to cut the toilet soap quota exactly in half which would be 37 per cent. That this is absurd on its face and would invite real chaos in soap distribution are the reasons why soapers are fighting the proposal in the much-hushed Toilet Soap Battle of Washington. Nevertheless, a cut of some sort in the toilet soap quota is a definite possibility.

TO return again to the raw material situation in conclusion, there arises another viewpoint which is of interest marketwise. A glimpse back over the oil and fat market for some 25 years reveals that active demand and high price have upon innumerable occa-

will be business casualties among those who refuse to recognize the new conditions. In ten years, there will be a new kind of American soap industry, probably chiefly in the hands of present progressive elements, but new nevertheless.

**With the war ended, soapers still face raw material problems, continued government regulation, a return to keen pre-war competition, and the advent of many new products**

sions acted as a magic wand in bringing "non-existent" supplies to market. This phenomenon has been pointed out here before. It is something to consider in viewing the present oil and fat shortage, particularly with relation to shipment of foreign oils and fats, not excluding Philippine coconut oil, to these markets. That there may exist accumulations of oils in many parts of the world whose presence is not generally known, is a possibility. It has happened before in times of scarcity. And the speed with which "destroyed" production facilities are upon occasion repaired and put back into operation is also amazing. In short, every commercial incentive exists to ship oils quickly to consuming markets both here and in Europe. This might conceivably shorten the period of scarcity materially,—and in spite of the almost unanimously dark opinion on the oil and fat outlook. In addition, the reduced demand for soap for military needs may have a greater effect on fat supplies than expected by the end of the year.

And with the war over, soapers as well as others will soon again become acquainted with the age-old law of supply and demand. They will again know what competition really is. The day when customers will beg and plead for soap is soon going to end. The battle of advertising and selling will be resumed, a battle of products which will be intensified by technical developments of the wartime period. There

The immediate problems seem to be fat and oil supplies, the necessity of continued operation under quotas and the threat of a further reduction in toilet soap production. Apparently only a decision of the USDA to release

some of its stockpile of coconut oil, or an early resumption of substantial shipments of coconut oil and copra from the Philippines can solve these related raw material supply problems. The long term problem would seem to be synthetic detergents, and it is the answer to this big question that soap makers will have to find over the next decade.

#### Surface-active Foamers

Mono- or polycarboxylic acids are made to react with a vicinal glycol and aldehyde to produce new surface-active, water-soluble agents with especially good foaming power. An example is the reaction product of ethylene glycol 242 parts, lauric acid 10.7, formaldehyde 126, cyclohexane 77.9, and sulfuric acid 1.58 parts. D. J. Loder and W. F. Gresham, to E. I. du Pont de Nemours & Co. U. S. Patent No. 2,366,738.

#### Surface Tension

The theories advanced to explain the change of surface tension with time were studied. The thermodynamic equation of Bond & Puls is supplemented by an equation based on a kinetic picture of a close-packed monomolecular layer. Consideration of experimental data indicated that poly-molecular surface layers approximately five molecules deep, are present in solutions of short-chain soluble substances. Sydney Ross. *J. Am. Chem. Soc.* 67, 990-4 (1945).

# Sources in the AMERICAS for Soap Making Raw Materials

**Central and South America play  
a role of increasing importance  
in production of raw materials  
for American soap manufacture**

**S**OUTH and Central America have assumed a role of growing importance as suppliers of raw materials for American soap manufacture during the recent wartime years. With our normal sources of far eastern coconut oil in the hands of the Japs, with Sumatran palm oil denied to us, with essential oils from these Jap-controlled areas also unavailable to American soap makers, we have had to turn to the western hemisphere for both perfuming and soap making oils to supplement our inadequate domestic production.

Babassu oil from Brazil is perhaps the best known contribution of the Americas to solving the oil and fat shortage. While we have not been able to secure delivery of as large quantities as had been hoped from Brazilian babassu production, the availability of babassu as a contribution to world supplies has been important. Had the British not been able to get babassu, they would necessarily have exerted an increased pressure against other oils which have been going into American soap production.

Less well known, but of growing importance in world fat supplies, is Central American production of such comparatively new oils as lucua, murumura, dende, cohune, bacaba, patana, corozo and coyol or mucaya. Many American soap makers have be-

come more closely acquainted with these comparatively little known oils over the past few years. Such stray shipments as have come through have been quickly snapped up, and the American soap maker's only regret has been that larger quantities and more regular and dependable supplies have not been obtainable. Through both Central and South America the problem is chiefly one of inadequate transportation facilities. Coupled with this is the tendency of the natives to stop work as soon as they have obtained enough immediate cash to take care of spot subsistence needs. The higher prices and wage scales that have applied over the past few years have thus, in some cases at least, acted to limit rather than to stimulate production. Apparently dependable supplies from these areas cannot be counted on, at least until plantation growth replaces spasmodic collection by the natives.

At present the African oil palm is the principal and most promising cultivated oil crop in the Middle Americas. It is distinctly a war crop, and no assurance is given that in the post-war period producers may be able to compete with the long established plantations of Sumatra and Africa once they get back into the normal routine of production and export. The United Fruit Company, however, has been active in encouraging the production of palm oil as a staple crop for citizen farmers of Middle America, and may be counted on to exert strong efforts to keep the war baby alive.

First experimental growth of African oil palms in Central America was started during the 1920s. The crop was found to respond readily to

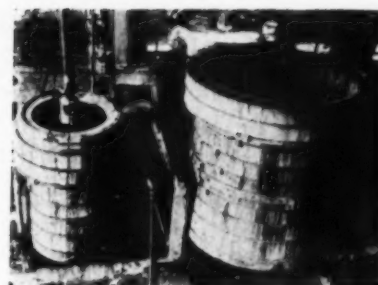


Nursery for African  
oil palms at La Lima.



← Harvesting coconuts in Costa Rica. Photos courtesy United Fruit.

Vats for production of oil of lemongrass at La Lima, Honduras. →



nursery propagation, and in Honduras tropical horticulturists of the United Fruit Company have introduced a dozen varieties of oil palms of high yielding and carefully developed types from West Africa, Sumatra, Java and Malaya. Percentages of oil from harvested kernels are said to range from 42 to 46 per cent of kernel weight. Trial plantings in several other Central American countries are also said to show promise as a staple continuing crop.

Work has also been done in improving the classic methods of palm and palm kernel oil extraction, with a view to increasing ratios of oil recovery and giving an oil of higher quality. Direct pressure methods of crushing are being amplified by preliminary steaming of the kernels. Increased use is being made of solvent and centrifugal extraction methods, and improved equipment for filtration, decolorizing and deodorizing is doing its share to raise quality standards above previous levels. Significant is the fact that more of the new equipment is being installed in the actual areas where the palm crops are being grown.

Small quantities of coconut oil and copra have also come from Central America over the recent war years. While the amounts have not been large, every small addition to our stock of this important soap making oil has assumed added importance as the coconut oil stock pile has shrunk in size during continued Jap occupation of our normal coconut oil supply sources. The inability of Central America to export larger quantities of coconut oil, palm oil and the other local products has stemmed largely from recent local increases in soap consumption. Cur-

rent studies indicate that local demand for fat and oil supplies in Central American and upper South American countries have at least doubled during the past five years, and is likely to exhibit a continued upward trend. In spite of this increased local demand for the growing oil and fat production, representatives of United Fruit are optimistic that these areas may be capable of supplying an increasing tonnage of the huge North American demand for soap making oils during the post-war years.

CENTRAL and South America have also played an increasingly important role over the wartime years in the production of essential oils for perfuming purposes. With our normal sources of supply for lemongrass, citronella, vetivert, etc., cut off from us by the Jap occupation of Java and Sumatra, American consumers have indeed been fortunate in being able to locate a new and growing source of supply in our own hemisphere.

For many years tropical agriculturists have known that these valuable oil grasses could be grown in the American tropics, particularly in the lowlands or medium altitude areas of Central America, northern South America and the Caribbean Islands. Even before Pearl Harbor a few profitable grass oil plantations had been developed in Guatemala and Brazil. But until we were cut off by the war from far eastern supplies, the growing and distillation of oil grasses had been primarily an enterprise based on coolie labor, and one with which the American tropics had shown no ability or willingness to compete. Only in Java had the agriculture of oil grasses been

well developed, and only in Java were these oils scientifically produced by efficient, and modern methods.

After Pearl Harbor, however, it became obvious that if the United States was to get any more of these essential oils, the grasses would have to be grown and the oil produced in the American tropics. In June, 1941, United Fruit agriculturists succeeded in importing into lowland Honduras some 65 "mats" of citronella or serch grass and made their first planting. By October of that year this first handful had been increased to half an acre of seed plantings, and at present the plantings in the area of La Lima, Honduras, cover about 200 acres. The same company has also more recently instituted the planting of a few acres of vetivert.

The experimental work with lemongrass started even earlier. From a first tiny planting begun at Lima in 1939, a seed bed of one and a half acres was developed. By 1942 this provided planting stock sufficient for 35 acres. Experimental harvests yielded about 13 tons of grass per acre yearly. Early in 1942 plantings were expanded to 135 acres, then to 200, in a continuing growth. Distillation tests showed first recoveries of about 97 lbs. of lemon grass oil per acre, and the oil now in harvest has an unusually high citral content and in other respects is also said to be far above normal market specifications.

Citronella yields average about twice those of lemon grass,—or from 195 to 210 lbs. of oil per acre yearly from three or four cuttings of the grass. And there seems to be no question remaining as to the quality of the Middle American grass oils. These

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# WAX FLOOR POLISHES

*By Milton A. Lesser*

**T**HE protective value of waxes was known to the builders of the Egyptian pyramids, but the idea of using such substances on floors goes back a mere few hundred years, probably to about the fifteenth century. For a long time only the wealthy could afford the luxury of wax-polished floors. Today, however, products of this type are classed as sanitation necessities.

Everyone concerned with the care of floors, whether those of a two-room apartment or of a skyscraping office building, has learned that a waxed floor may be kept in good condition with a moderate amount of care. Aside from the labor-saving element, it is now well recognized that a properly cared for waxed floor improves with age, which is probably more than can be said for any other type of floor finish.

Just as flooring materials have gone through many changes, so have wax polishes passed through quite an evolution. The old time manufacturer was concerned chiefly with wooden floors and the need for large amounts of elbow grease to apply waxes was generally accepted as quite natural. With progress came linoleum, cork tile, rubber tile and other kinds of flooring materials and with them the need for wax products that could be applied speedily and efficiently and yet not sacrifice too much to quality.

Wax floor polishes have attained a major position among sanitation materials. This is reflected, not

only in sales records, but in the many attempts to set up specifications for such products. (1,2) While as yet there is no full agreement among these several standards, (3) and with test methods still being evaluated (4) there is a growing awareness of the characteristics that are expected of wax floor polishes in general. Several authorities have expressed their opinions on this subject from time to time. Luster and gloss are important considerations, but other factors enter very definitely into the picture. Such elements as slip, wear, washability and tracking, as well as ease of application, maintenance and coverage all warrant considerable attention.

Not so long ago, in discussing the factors constituting a good floor wax, Jarden (5) stressed that a product which is really worth consideration must be well balanced in at least eight different points of quality. These points of quality were listed as follows: (a) Safety with regard to chemical composition, (b) Safety with regard to non-skid qualities, (c) Water resistance, (d) Wearing qualities, (e) Resistance to dirt, (f) Ease of application, (g) Luster, and (h) Price.

The safety element, so definitely emphasized in Jarden's summation, has been stressed by other workers as well. As remarked by James (6) of the Underwriters' Laboratories, "Floor finishes, while of primary importance from a preservation and maintenance point of view are nevertheless being regarded more and more from the safety angle." This emphasis on safety has

not gone unremarked by floor wax manufacturers and considerable work on this phase of polish formulation has and is being done.

An important factor very often overlooked in discussions of polishing and protective waxes is the need for proper preparation of floors prior to application of such finishes. That waxes should be applied only to thoroughly clean and dry surfaces appears quite obvious, but too many people forget or never knew the importance of this preliminary treatment. Poor results are thus blamed on the wax, rather than on the user.

In preparing a new or refinished wood floor for wax polishing, it is common practice to apply a thin film of a quick-drying varnish before waxing. Wood floor sealers are also being used for sealing close-grained wood or for sealing open-grained wood which has been treated previously with a wood filler; the sealed floor then being waxed. On occasion, two coats of wax are used, the first application serving as a sealer or undercoat. (7) This last procedure is especially appropriate on linoleum, rubber tile and cork tile floors. (8)

Floor polishes in general use fall into three main categories, namely, paste waxes, liquid waxes, and emulsion waxes. Paste and liquid waxes differ from emulsion waxes in that volatile solvents are used as vehicles for the active ingredients, whereas in the emulsion types, water is the chief liquid component. Certain types of liquid polishes, however, may be made with fair proportions of water. Another major difference is the fact that wax pastes and liquids generally require considerable elbow grease or mechanical pressure to achieve a bright, glossy finish, while emulsion waxes dry to a hard, lustrous film when applied with a mop or lamb's wool applicator. Known variously as "self-polishing," "no-rub," or "dry-bright" polishes or waxes, these emulsion products now dominate the floor polish field.

The oldest type of standard wax products are those of the paste class. These generally consist of a mixture of waxes, either natural or



synthetic, in organic solvents like turpentine or hydrocarbons such as naphtha, Stoddard Solvent, benzene, gasoline or the like; the choice of solvent being determined by cost, availability, odor and drying time desired. Paste wax is often preferred where power equipment is used and where a thicker application is desired in one operation.

With the exception of the use of synthetic waxes and newer solvents, paste wax formulation has undergone no major changes during recent decades. Thus, a paste wax polish recommended (9) nearly thirty years ago does not differ markedly from the product suggested by Smither; (7) one consisting of:

Carnauba wax	.....	2 parts
Ceresin	.....	2 "
Turpentine	.....	3 "
Gasoline (sp. gr. about 0.73)	.....	3 "

By increasing the quantities of solvents, (e.g. to a combined total of 12 to 15 parts by weight) this polish can be transferred to the liquid wax type of product.

Of course, many variations of paste polishes are available in the technical literature. Very often the choice of solvent is left to the manufacturer, as in the following paste wax suggested by Schwarcz, (8) to which suitable coloring material may be added if desired:

Paraffin	.....	19 parts
Ozokerite	.....	4 "
Carnauba wax	.....	15 "
Solvent	.....	62 "

Sometimes natural resins are included with the waxes; their incorporation serving to impart a harder finish and presumably to lessen slip. An example of such a polish is as follows: (10)

Pale East India gum	.....	18 parts
Paraffin wax	.....	8 "
Carnauba wax	.....	6 "
Turpentine	.....	68 "

**M**ANUFACTURE of paste waxes presents no great technical difficulties, except that a container may need several fillings because the masses generally shrink on cooling. Ordinarily all that is required is to melt the waxes in a steam-jacketed kettle, add the solvents, and cool the mass as

rapidly as possible while vigorously agitating to produce a smooth product.

Requiring less work to produce a high luster, liquid polishes reached their highest popularity about fifteen years ago, but even at present such products command quite a respectable market. Actually, there are two types of so-called liquid polishes. First there are those containing no aqueous ingredients and then there are products which contain substantial quantities of water.

The first or "solvent" type of liquid polish does not differ materially from paste waxes except that they contain higher proportions of solvent, with or without the addition of oils. Their method of manufacture is also very similar. Illustrative is the following quite simple formula for a liquid wax of this type: (8)

Carnauba wax	.....	1 part
Ceresin	.....	1 "
Solvent	.....	18 "

Even when passed through a homogenizer, solvent type liquid waxes often show a tendency to separate on standing and often require shaking or heating before use. Hence it is advised that the wax content be increased for warm-weather use products. To meet this requisite, the following process, (10) may be tried; using as a base a combination of:

	Parts
Paraffin wax (m.p. 50-52° C.)	..... 50
Ceresin (m.p. 58-60° C.)	..... 10
Carnauba wax	..... 40

For summer products dissolve 7 to 9 parts of the above base in 93 to 91 parts of turpentine, while for winter use, add 6 to 7 parts to 94 to 93 parts of turpentine.

Here again, the technical literature offers may modifications. On occasion, patent sources offer interesting variations from the usual types of liquid waxes. In one such instance, (11) a base consisting of 55 per cent barium stearate, 28 per cent paraffin wax, and 17 per cent of a hard wax is colloiddally dispersed in spirits of turpentine to form a stable floor polishing product.

The second type of liquid polish, actually the fore-runner of mod-

ern self-polishing products, required a certain amount of rubbing to produce a desirable finish. By the use of emulsifiers, it was possible to incorporate substantial proportions of water, plus other water-soluble ingredients, in with the oils and waxes. One old time product of this kind, (9) still cited in modern sources, (7) consists of:

Turpentine	.....	1 pint
Beeswax	.....	4 oz.
Ammonia (10% solution)	.....	3 oz.
Water, about	.....	1 pint

Much more up-to-date is Belanger's (12) formula for a liquid floor wax dressing:

Carnauba wax, No. 1, yellow	.....	1 lb.
Yellow ceresin	.....	2 lb.
Good quality soap chip	.....	6 oz.
Turpentine	.....	1 qt.
Kerosene	.....	1 pt.
Water	.....	2 gal.

Dissolve the soap in the water with the waxes and on solution remove from heat source. Add the turpentine and kerosene and stir until thickening begins, then pour into suitable containers.

**T**HOUGH comparative newcomers, the emulsion or nonrubbing, self-polishing types of floor waxes had begun to dominate the field ever since their introduction during the early thirties. Offering many advantages, not the least of which are ease of application and freedom from inflammable vapors, such polishes are now widely used on wood, linoleum, rubber tile, cork, asphalt tile, mastic, concrete and other floorings. These water-wax emulsions are usually based upon carnauba wax, often with other waxes and resins, dispersed in water by means of various emulsifying or stabilizing agents.

The formulation of stable emulsion wax products was filled with many difficulties and even today the production of a satisfactory product requires skill and an appreciation of the many factors involved. Hence formulas can only be suggestive bases from which uniform polishes may be developed.

In a sense it may be said that progress in the production of such products can be traced by way of the emulsifying agents used. As might

well have been expected, sodium soaps were among the first emulsifiers tried and some quite effective products were obtained with such materials. For example, according to Smither,(7) a simple, experiment carnauba-soap emulsion polish may be prepared as follows:

Dissolve 1 part by weight of castile soap in soft water and heat to boiling. Add to the boiling solution, with constant stirring, 4 parts of carnauba wax, previously cut into small pieces. When a smooth homogeneous emulsion is obtained, cool to 135° F. by quickly adding, with continuous stirring, the necessary quantity (e.g. from 14 to 16 parts) of water. Allow to cool and filter through cheese cloth and stir in about 0.5 per cent of formaldehyde as a preservative.

Sodium soaps, however, sometimes show a tendency to bloom after a time (13) so a search was made for other types of emulsifiers better suited to the particular needs of floor polish formulation. The introduction of triethanolamine appeared to prove a good solution to the problem and today this material is extensively used as a stabilizer for such products. The following formula, cited in several sources with but minor variations,(8,12,13, 14) may be considered the prototype of emulsion polishes made with triethanolamine. As given in a Government text,(7) it consists of:

Carnauba wax .....	13.2	lb.
Oleic acid .....	1.5	lb.
Triethanolamine .....	2.1	lb.
Borax .....	1.0	lb.
Water (boiling) .....	11.5	gal.
Shellac (dry flakes) .....	2.2	lb.
Ammonia (28%) .....	0.35	pt.
Water (room temperature) ..	2.0	gal.

Melt the wax and add the oleic acid, maintaining the temperature at about 194° F. Add the triethanolamine, stirring constantly, to form a clear solution. Dissolve the borax in about one gallon of the boiling water and add to the above solution to form a clear, jelly-like mass. Add the rest of the boiling water slowly with constant stirring. Allow to cool. Separately, add the 2 gallons of cool water to the shellac and then add the ammonia; heat until solution occurs. Allow to cool and finally incorporate the shellac solution in the wax solution; stirring well.

Ammonium linoleate, occasionally employed as an emulsifier, imparts improved spreading qualities and reduced scuffing to polishes made with it. Its chief disadvantage, however, is the fact that this material sometimes causes polishes to become brittle.(8) Illustrative of its employment is the following formula for making a bright-drying wax polish:(10)

Carnauba wax No. 1.....	10.0	Gm.
Ammonium linoleate paste. .	3.0	Gm.
Borax .....	2.0	Gm.
Water .....	90.0	cc.
Turpentine .....	1.0	cc.
Pine oil .....	0.25	cc.

Heat the wax, turpentine and oil to 100° C. in a jacketed vessel equipped with a high speed stirrer. To this slowly add a solution of the paste borax and water previously heated to the same temperature. Stir vigorously until emulsified.

In 1938, Robertson and Wilson (15) discussed the possibility of using morpholine in wax polishes. They pointed out that when this emulsifying agent was used, its evaporation after the wax had been placed on the floor results in a film with superior water resistance. The small droplets produced with such emulsifiers also give a high gloss. A simple polish based on the use of this agent contains:

	Parts
Carnauba wax .....	11.2
Oleic acid .....	2.4
Morpholine .....	2.2
Water .....	67.0

Melt the wax and oleic acid together and maintain at 85° to 90° C. with constant stirring, then add the morpholine slowly until clear. In another vessel, heat the water to boiling and add slowly to the hot wax mixture. During the addition of water, the emulsion becomes very viscous; when this point is reached the emulsion will reverse, at which time the rest of the water may be added rapidly with constant stirring. If desired, rosin or shellac can also be added to this mixture.

Other polishes based on morpholine are given by Thomssen and Johns. (14) These workers also point out this agent may be used advantageously with triethanolamine. According to Schwarcz,(8) it is now fairly common

practice to replace part of the triethanolamine with morpholine; resulting in a reduction of the total quantity of emulsifier. A proper balance between the two gives finished products with many desirable features.

In 1940, another emulsifier was made available commercially(16) and it has since found increasing use in the production of emulsion wax polishes.(14) Chemically this agent is called 2-amino, 2-methyl, 1-propanol, but it is better known to the trade as A-M-P. Polishes made with this newer material show excellent water resistance. Quite economical to use, A-M-P produces uniform, lighter colored emulsions.

**A**LTHOUGH wax polishes are generally applicable to most types of flooring materials, products are sometimes developed or recommended for specific kinds of floors. This is especially true in the case of linoleum and rubber floorings. For example, a rather old-fashioned polish, recommended (17) for use on linoleum, consists of:

	Parts
Yellow wax .....	1.5
Carnauba wax .....	3.0
Benzin .....	4.0
Oil of turpentine.....	4.0

More modern, is the following "non-slippery" linoleum emulsion wax: (10)

	Parts
Carnauba wax .....	15
Montan wax .....	5
Rosin, light .....	5
Turpentine .....	20
Potassium carbonate .....	5
Diglycol stearate .....	5
Water .....	45

In a discussion of the preservation of rubber floors, Barron (18) made several valuable recommendations. Among them was a formula for an excellent polish prepared as an emulsion from:

	Parts
Carnauba wax .....	87.0
Oleic acid .....	9.0
Triethanolamine .....	4.9
Water .....	500.0

If this quite simple preparation proved too slippery, he recommended that it be modified along the following lines:

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# MARKETING RESEARCH

Part II

## *in the Sanitary Chemical Field*

By Robert S. Aries\*

IN its broadest definition, marketing research includes topics which should normally be part of the sales department. They include sales promotion, sales performance, channels of distribution, etc. It is the writer's experience that these topics should be left to the sales and technical service departments, although close cooperation and help should be given to them. Economic data are, for example, facts dealing with the geographical location and the density of distribution within geographic areas of potential customers; the limitation imposed upon the sales effort by natural and human obstacles as well as economic barriers; population and its changing character; redistribution of wealth and income; savings; and the basic statistical data upon which they may formulate an accurate maximum sales possibility for later reduction to an achievable sales expectancy.

Such data should be available and kept in mind as they might be the most important factors in the long run. Publications on them should be consulted frequently and kept in mind in all analyses. Oftentimes an outside organization will be better prepared to conduct a survey of such a nature if it should be necessary. The sales department should be kept informed on trends and channels of distribution with which it might not be acquainted. The advertising department should properly be "fed" by a well qualified marketing research department, but the latter should not normally do any sales promotion itself.

The marketing research department should cooperate and help the

sales department on topics such as the preparation of forecasts, determination of market potentials, setting of quotas (domestic, foreign, individual, class, etc.), measuring consumer acceptance, psychological factors, analyzing competition, and promoting better distribution. Helpful factors in this respect are the use of field interviewers, distributors, if any, and an outside organization, and the combined judgment of the executives of several departments. The setting of sales quotas is the task of the sales department, which may utilize the reports issued by the marketing research department. They are given on the basis of trends or shifts in emphasis between products, changes in the characteristics of territories, extent of past sales effort, or new uses for old products. Charts and maps on income, volume, personnel, etc., are helpful in this connection. Surveys with an emphasis on economic aspects frequently necessitate questionnaires, interviews, direct investigations, and elaborate statistical analyses. In the case of the vast majority of smaller chemical industries such surveys are most advantageously handled by outside organizations who have large staffs specializing in securing a composite picture of present and expected business conditions in a given company's market.

### Project Engineering Analysis

IN all cases where the marketing analysis shows promise, it should be followed by a more detailed technical analysis, which is the liaison between the marketing research department and the research laboratory or pilot plant. This can best be done by a chemist

or preferably a chemical engineer who will "follow up" the report. He can be affiliated with either department, but should preferably be under technical research, as the project should be taken out of the hands of marketing research once it has submitted its report, save for corrections or additions to it. The project and process analyst will re-examine the report, especially with respect to its technical phases, analyze methods of production, costs, raw materials, location factors, optimum scale of operation, etc., and pass the problem along for further research or development work.

The project engineer is an important link in the chain of people responsible for new product development, as will be described in more detail later. It should be clearly understood, however, that unless there is co-operation between all the departments with marketing research, the work of the latter will be severely handicapped.

### Place in Product Development

UNDER product development we may include not only the technical developments within a company's own organization, or a retained consultant, but also the acquisition of other companies, other established products, or new and untested products. Product development proper is out of the scope of the present discussion, but it should be stressed that marketing research is not a substitute for it. It merely illuminates it and directs it to the markets which present the greatest opportunity for the company's skills. Several steps are in-

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volved in new product research, which may be summarized as follows:

1. Creating facilities for securing new ideas. They may emanate from the operating and research staff, sales and technical service organization, executives, or outside sources.

2. Preliminary weeding. This screening is done on the basis of the memorandum describing the idea and can be done by executives, in the development or operating staff, marketing research or sales departments. Its purpose is to eliminate suggestions with easily discernible basic defects.

3. Preliminary technical research may sometimes precede a market search. A study may be made to explore the potentialities and no further screening.

4. Marketing research is conducted before substantial amounts are spent on technical research. A preliminary market analysis is often made, at the request of any other department, before conducting any technical research. A final marketing analysis is frequently scheduled to accompany or follow the pilot-plant work.

5. Project and process analysis can be made part of the marketing research or done by a specially trained man of the technical department. It will include a process analysis, study of costs, profits, plant investment, and a preliminary design.

6. Development work by the research and development department. While it is being conducted or after all the major "bugs" are taken out of it, a detailed marketing survey is in order.

7. Regular production.

Marketing research is thus only a small but important part of product development. It should correct the costly procedure of attacking markets just because they "look attractive." It determines their actual potential, obtains their essential characteristics and requirements, discovers whether the company can meet them and make a real contribution to the advantage of all concerned.

#### Organizing Market Research Dept.

As stressed throughout the discussion, marketing research should be an organized activity of a company. It is natural that no fixed pattern can be prescribed for all companies, as much will depend on the amounts, character, and scope of the products made, financial condition of the firm, etc. One of the following categories may be followed:

1. An independent department or division.

2. A unit of one or more workers who are part of the sales or re-

search and development department. Sometimes a consultant performs similar tasks.

3. A committee, either alone or supplementing the above patterns.

There is a trend toward the formation of a central marketing research department, which would neither neglect the function—a possibility in the case of an executive with several tasks—nor would it be prone to present biased opinions. A typical setup would consist of:

Director of market research.  
Market analysts (one or more).  
Statistician.  
Librarian and senior secretary.  
Secretary.

Variations to this setup may include tabulators and comptometer operators, field investigators and interviewers, the use of the company's staff librarians, the use of marketing research consultants, etc. It is desirable to have a small compact staff, extensive field research being left to outside agencies.

Interdepartment committees on marketing research have not proved very efficient in the sanitary chemicals industries. They may help avoid duplication of effort and make suggestions, but do not seem to create adequately the mechanism for practical research and fact-finding on a continuous basis. Unless someone takes the matter in his hands, a lagging tendency in committee activity will increase. Sometimes committees may be found able to supplement the marketing research department or the market analyst. In the case of a central department the importance of a committee is minimized, as the reports are circularized anyway to all interested executives, with a request for comments. Continuous close cooperation between the various departments also makes committee meetings of lesser importance. Individual preferences will, of course, have to determine the exact approach and procedure.

The man in charge of technical marketing research should enjoy strong executive sponsorship and have a high standing in the organization. In contrast to the requirements of some other industries, it is preferable that he be technically trained. For one thing, a nonchemically trained man

often is ridiculed by the technical staffs, thus lessening his prestige and cooperation given to him. As formal education he should preferably also have training in business administration. It is hoped that more colleges will organize courses of such a nature in the future. The marketing research director should have a varied experience in research, development, production, and marketing.

He should preferably report to the president or executive vice president and general manager. Such a setup rather than departmental jurisdiction eliminates self-interest and broadens his scope of activity. A very efficient marketing department, of an insecticide manufacturer, is headed by an individual who is also assistant to the president. In order to obtain sound data, the director of marketing research should enlist the cooperation of all departments both in securing information and being asked to help them by conducting studies.

#### Common Marketing Errors

An efficient marketing research department should constantly observe the market, check trends, test the effects of new products and inventions whether of its own firm or a competitive organization, and, in general, be able to inform the management in advance of marketing changes. Common causes responsible for failure of chemical marketing research are:

1. Use of unqualified men for marketing research. As in technical research, this is a very basic problem. If a man has been a good employee, whether in research, sales, or advertising, he is not necessarily qualified to be a good marketing researcher. The person in charge should not only be a good chemist and businessman, but should also be devoid of prejudice and wishful thinking.

2. As explained elsewhere, marketing research should not be placed under an executive who cannot devote enough time to it. The marketing research group should be able to contact all departments, yet be uncolored by the interests of any one of them. The person or consultant in charge should devote all his efforts to it in an unbiased manner.

3. Performing mistakes of analysis, such as overestimating or underestimating the company's percentage in the total market. While it may be natural to belittle one's competitors, the opposite is oftentimes true. The overcautious marketing man frequently un-



derestimates the opportunity for creating new business by overestimating the company's competitors as a sales obstacle.

4. Making chemical and technical mistakes. If the department is not manned by technical men, the company will be exposed to the dangers of "half-baked" plans resulting from an insufficient background of chemical knowledge. Nontechnical men will depend more heavily on the literature and thus follow progress rather than precede it. Such men are apt to be ridiculed by the research department and lack the esteem and cooperation which marketing research needs in order to be successful.

5. Making economic and business mistakes. While the percentage of error in executive judgment is relatively high, items such as price resistance, competitors' sales policies, relative values of sales, and advertising appeals should be judged in a sound manner. Placing too much reliance on personal observations is dangerous. Oftentimes a technical man is reluctant to study and analyze complex statistics. A good businessman will face the facts promptly when sales decline, rather than blame others for it.

6. Failure to apply the facts developed by marketing research. In a number of cases with which the writer is familiar, competent surveys have been made only to be filed into oblivion by some executive. It is surprising to know many companies have spent money on reports and not only failed to use the data developed, but consider it "confidential," do not circulate it in the company, and do not even read more than the summary and the headings.

7. The time factor is often disregarded in connection with marketing research. Many executives appreciate the fact that chemical research may extend over long periods but underestimate the amount of spadework necessary for the investigation of the marketing aspects. Projects sometimes require considerable time of "genation" and the results may not become apparent immediately. Impatience on the part of executives through lack of understanding can—just as in technical research—tend to discourage dependable work and lead the marketing research personnel to seek shortcut alleys and projects of work.

#### Sources of Marketing Data

BESIDES data from one's own company such as material available or obtainable by the sales, accounting, manufacturing, and research departments, outside or secondary sources are used extensively in marketing research. They are invaluable as a research tool for oftentimes the value of a report is a direct function of the efforts put into studying and collating the various sources of data.

The following list of sources does not claim to be complete, because

of the lack of space. The reader is referred to some of the publications cited which give extensive bibliographies.

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Nonferrous Metals and Their Products, Paper and Allied Products, Textiles and Clothing, etc.

Other Government Agencies: Department of Agriculture—statistics on forest and agricultural products and by-products (especially Bureau of Agricultural Economics, the Bureau of Agricultural Chemistry and Engineering, and the Forest Products Laboratory)

Bureau of Mines; New Publications, Minerals Yearbook, monthly reports on coal, coke, cement, petroleum, etc.

Department of Labor: Statistics of labor, employment and prices in Monthly Labor Review, Labor Handbook, Industrial Area Studies, etc.

Treasury Department: Bureau of Internal Revenue; Alcohol Administration Division giving statistics on ethyl alcohol

Tariff Commission: Numerous reports on chemicals and allied products

Securities and Exchange Commission: Census of Corporations, Directories, and miscellaneous publications

Civil Aeronautics Board: Data on air navigation

Federal Power Commission: Electric power statistics

Federal Reserve System: Annual Reports, Bulletin

Federal Trade Commission: Reports on fair trade, agriculture, textiles, etc. Annual report on chemical industries

Office of Price Administration  
Interstate Commerce Commission

Public Roads Administration  
National Bureau of Standards: Numerous publications and lists

United States Housing Authority: Several publications, including Technical Bulletin

War Food Administration  
Federal Works Agency (now discontinued)

War Production Board: Miscellaneous reports, statistics, bulletins

Miscellaneous Senate and House documents, hearings, etc.

Works Projects Administration (now discontinued)

Smaller War Plants Corporation  
Maritime Commission: Statistics on water transportation

National Resources Planning Board: Reports up to 1944 on income and expenditures, trends, building, research, etc.

State and local governments.

Technical and Trade Magazines: Important emphasis should be placed on periodicals, since, besides other new material, they often print government and other information.

Soap and Sanitary Chemicals  
Drug and Cosmetic Industry  
American Perfumer and Essential Oil Review  
Chemical and Engineering News  
Chemical and Metallurgical Engineering  
Chemical Industries. (Also Buyers' Guide Book)

(Turn to Page 77)

# RAW MATERIALS

FOR THE SOAP AND ALLIED INDUSTRIES

ANIMAL OILS, FATS, CHEMICALS, VEGETABLE OILS

DRUMS — TANK CARS — TANK WAGONS

Every raw material necessary for the manufacture of soap and allied products is carried in stock and is available at the right price for immediate delivery to your door.

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OLIVE OIL FOOTS  
PALM OIL  
PALM KERNEL OIL  
PEANUT OIL  
RAPESEED OIL  
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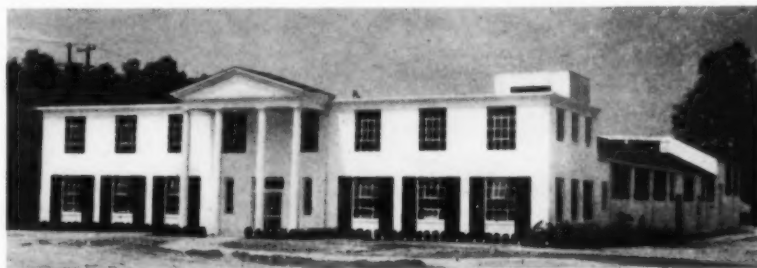


**EASTERN INDUSTRIES, INC.**

RIDGEFIELD, N. J.

### Tesco in New Atlanta Plant

Tesco Chemical Co., Atlanta, recently occupied a new, 33,000 square foot building of Colonial style exterior and modernly designed interior on a six acre site on Northside Drive at the Seaboard railway in Atlanta. The new plant provides approximately three times the amount of space as the original plant on Huff Road, N. W., although the Huff Road plant will continue to be operated until building conditions permit further construction. Administrative offices and laboratory are located in the new plant, which also features a spray tower, believed to be the only one in the At-



lanta area. The new plant has a three car railroad siding and sizeable space for truck loading and unloading. Tesco is four years old, having been founded by T. E. Schneider, who was formerly connected with International Minerals and Chemicals Co. When that firm

moved from Atlanta to Chicago, Mr. Schneider purchased its Textile Chemical Department and started his own company. Tesco manufactures all types of soap, excepting bar soaps, and its products are used widely in the textile industry in its finishing operations.

### Urges More Soap for U. S.

A plea that steps be taken immediately by the Administration to remedy the shortage of soap flakes, laundry soaps and work clothing was voiced in the House of Representatives recently by Gerald W. Landis, Republican of Indiana. Representative Landis said, "It is apparent that much of our soap is being shipped overseas, but unless it is going to our armed forces, our civilians should be given preference to civilians in foreign lands."

### Open Wrisley Recreation Centre

A recreational center that has an area of 6,000 square feet and houses a cafeteria, lounge and meeting place for various employee association activities was scheduled to be opened Aug. 15, by Allen B. Wrisley Co., Chicago, across the street from its plant and offices at 6801 W. 65th St. The building, which is modern in construction and design, is a recreational nucleus which will be expanded to provide bowling alleys, locker rooms for athletic teams, and larger dining and kitchen facilities. On land surrounding the building, horse shoe and tennis courts and a baseball field are

to be developed. The building committee of the company's employees' association has directed the work of the architects. The employees' association was organized in 1944 for the purpose of promoting the social, educational and physical welfare of Wrisley employees.

### Joins Lever Bros. Division

Robert F. Elrick has been appointed manager of the newly created department of product testing and market analysis of the Pepsodent division of Lever Brothers Co., Cambridge, Mass., it was announced recently. Previously Mr. Elrick was director of advertising and marketing research for Quaker Oats Co., Chicago.

### Fowler Visiting So. Africa

Albro C. Fowler, of the foreign division of American Home Products Corp., New York, left recently for a trip through South Africa and Rhodesia, where he will survey the possibilities of that area for postwar sales expansion. The corporation has two subsidiaries at present in the Union of South Africa. Kolynos S. A. (Pty.) Ltd., manufactures and sells "Kolynos" dental cream within the Union.

### Price Appeal to OPA Denied

J. Dietrich & Co., San Antonio, Texas, soap manufacturers, report that they have met with complete failure in their appeal to OPA for an increase in their soap price ceilings. A. G. Dietrich of the Dietrich firm, reports as follows on his appeal to OPA for price relief:

"We are still right where we were at the beginning of January with the OPA. While we did not give the details of our industry from 1936 to 1939, and then up to the present time, we did send the OPA the run of a batch of soap from one of our kettles, giving cost and formula, which showed the cost per box had risen to the level of the ceiled selling price. About two weeks ago the OPA wired for our 1944 income report, and our auditor in his report showed that the sales of oils and chemicals were carrying the load of our factory. Also we mailed them samples of one of our soaps, together with a relatively new brand of soap selling at an inflated price which is being shipped here from Chicago. We predicted the current soap famine and requested leeway from the OPA to help out in this shortage, but none of our communications up to this writing have brought us any relief."



#### Roden Heads Affiliated Products

H. W. Roden, vice-president of American Home Products Corp., was appointed head of the corporation's cosmetic division and president of its cosmetic subsidiary. Affiliated Products, Inc., the company announced Aug. 14. He succeeds W. F. Wulffleff, vice-president of America Home Products, as president of Affiliated Products, Inc. Mr. Wulffleff has been appointed to the parent corporation's finance committee and assumes presidency of the John F. Murray Advertising Agency. Mr. Roden has been with the corporation since 1939, when it acquired Harold H. Chapp, Inc., of which Mr. Roden was president.

#### N. Y. BIMS Hold Final Outing

Walter J. Jamieson, Wallace Paper Box Corp., won the grand prize at the final outing of the BIMS of New York, at Plandome Golf Club, Plandome, L. I., N. Y., Aug. 23. There were 70 members and guests on hand for the day. Martin F. Schultes of Hewitt Soap Co., was chairman. George H. Fuller, of Harriet Hubbard Ayer, was runner up, while Sewell H. Corkran, E. N. Rowell Co.-A. H. Wirz, Inc., Paul A. Dunkel, Paul A. Dunkel & Co., and Clint Brinkerhof, of Lamont Corliss, followed in that order to make up the top five prize winners.

#### Wm. C. Schroeder Dies in Fla.

William C. Schroeder, Chicago branch manager of Schroeder & Tremayne, Inc., importers of sponges and chamois, New York, died last month at Clearwater, Fla., of a heart attack. Mr. Schroeder, who was a widower and the father of the Rev. Theodore Schroeder and Mrs. Velma Fisher, was in Florida for a rest. Funeral services were held August 18, in Chicago.

#### Lift Glycerine Restrictions

Orders WFO 134, covering glycerine, WFO 128, governing animal and neat's foot oil, were lifted by the War Food Administration, effective Aug. 25, and restrictions on inventories of wool fat were removed effective Aug. 25, by the Department of Agriculture, it was announced Aug. 25.

Controls over distribution and use of wool fat were also lifted. War Food Order 134 had restricted inventories of glycerine users and distributors since June 20, 1945.

#### Middlebrooke Lancaster Expands

Middlebrooke Lancaster, Inc., Brooklyn, are expanding their manufacturing facilities by the addition of 11,000 square feet of floor space and the installation of modern sanitary equipment and manufacturing methods, according to a recent announcement. Through the use of rapid automatic machinery production speed is expected to be increased and previous hand operations will be eliminated. At the same time, the company has just announced that a new line of retail toiletries will be on the market for Christmas. The men's line is to be known as "Lord Middlebrook," while the women's line will carry the "Lady Middlebrooke" designation.

#### van Ameringen Back from Europe

A. L. van Ameringen, president of van Ameringen-Haebler, Inc., New York, perfuming materials, returned last month from a trip to Europe during which he visited the essential oil producing areas.

#### Can Co. Torpedo Plant Converting

In place of torpedoes for the Navy, cans for insecticides and other products will roll off an assembly line around the first of next year at the 600,000 square feet St. Louis plant of American Can Co., New York, the company announced late in August. The plant, which was completed for can manufacturing just after Pearl Harbor, has been leased to the government for the manufacture of torpedoes for the Navy under American Can Co. management. Torpedo manufacture was stopped Sept. 1, upon order from the Navy and the work of dismantling and removing of government machinery and equipment was to begin shortly thereafter. The company's other, older St. Louis plant, which was used for container manufacture during the war, will be abandoned.

#### Canadian Cleaners' Value Rises

An increase in value of products turned out by Canadian soap, washing compound and cleaning preparation factories for 1943, as compared with 1942, was reported recently by the Dominion Bureau of Statistics. Production from the 134 factories in Canada making cleaning products was valued at \$31,491,328 in 1943, as compared with 126 plants whose 1942 output was valued at \$31,484,125. The number of employees declined from 3,268 in 1942 to 3,220 in 1943, salaries and wages amounted to \$5,853,026 in 1943, as against \$5,490,076 in the previous year, while capital employed totaled \$22,765,347 in 1943, as compared with \$23,964,341 for 1942.

There were 46 plants engaged primarily in the manufacture of soap, of which 19 were in Ontario, 14 in Quebec, four in Alberta, five in Manitoba, three in British Columbia and one in New Brunswick. These establishments reported 2,663 workers with a production valued at \$27,834,166. There were 51 firms making washing compounds as their principal product, 23 being located in Quebec, 19 in Ontario, six in British Columbia, and one each in Alberta, Manitoba and Nova Scotia. Their output was valued at \$1,304,023 and employees numbered 276, compared with production valued at \$1,195,175 and employees at 254 for the 45 plants reporting in this category for 1942.

Cleaning preparations were the main products of 37 companies in 1943. Their geographical distribution is reported as follows: Ontario, 19 plants; Quebec, 11 plants; Manitoba, two plants and British Columbia, five plants. Production amounted to \$2,353,139 in 1943 and there were 281 employees. In the previous year, 38 plants employing 293 people had an output valued at \$1,921,820. The main products were cleaning powders, hand cleaner and drain pipe cleaner.

#### Wm. H. Rogers Address Change

William H. Rogers, producer of ground and other forms of pumice, has announced that his new address is 70-80 Park St., Beverly, Mass. The firm address was formerly Lynn, Mass.





*Many materials and processes contribute to the making of a smart white fabric...pulp and paper...an ingot of pure metal...potable water...or an insecticide. But to all of these...and many more... $\text{Cl}_2$  is an important common denominator. In producing liquid chlorine and the other basic chemicals of its manufacture to the highest standard of purity and uniformity, Niagara is ever mindful of its responsibility as a leading and pioneering factor in America's great electro-chemical industry.*

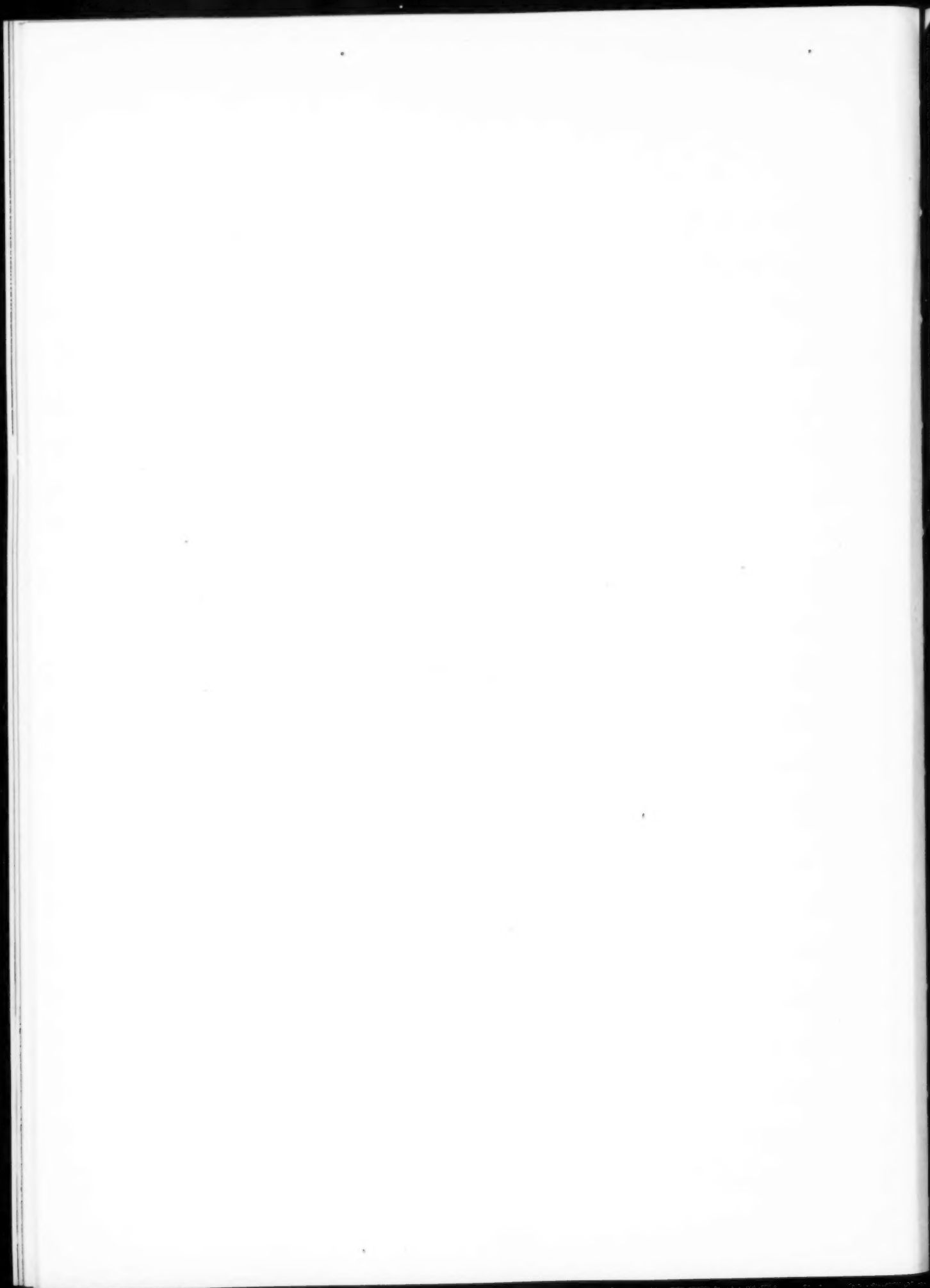
*An Essential Part of America's  
Great Chemical Enterprise*

*Niagara Alkali Company*

CAUSTIC POTASH • CAUSTIC SODA • PARADICHLOROBENZENE • CARBONATE OF POTASH • LIQUID CHLORINE • NIATHAL



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# synthetic detergents

- LIME SOAP DISPERSANTS
  - WETTING AGENTS
  - HARD WATER CORRECTIVES
  - WASHING COMPOUNDS
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### A WORD OF APPRECIATION

With Victory won and over 90% of our facilities released from high-priority production, we express our deep appreciation of the four years of splendid cooperation both by Government agencies and users of Westvaco Chemicals.

### A PROMISE FOR THE FUTURE

With more than 25% of pre-war personnel in the Armed Forces, our plants at Carteret, N. J., South Charleston, W. Va., and Newark, Calif. nevertheless boosted deliveries to all-time highs. We confidently expect to render even finer service into the future on Westvaco Chemicals.

### AN INVITATION TO CHEMICAL CONSUMERS

In this transition period, we sincerely believe that it is mutually advantageous to buyer and seller to anticipate future needs as accurately as possible. We therefore solicit the early opportunity to discuss your current and 1946 requirements for

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## New Soap Plant in Hawaii

**W**HAT is believed to be the first Army sponsored soap plant has been operating in Honolulu, supplying Army and Navy soap needs, it was learned recently. The soap company is Mid-Pacific Soap & Supply Co., 123 Puuhale Road, Honolulu 12. A recent report stated that the company is supplying not only Army laundry soap requirements of 700,000 pounds yearly, but almost twice that amount for the Navy as well. Over 2¼ million pounds of grease are collected annually by the Army and Navy that would otherwise be wasted. There are thousands of permanent and transient troops in the Territory of Hawaii needing soap that had to be imported from mainland plants and there was not enough soap made in Hawaii for civilian needs, let alone for military requirements. At the same time, mainland housewives were saving waste fats while in Hawaii it was being thrown away. To collect, pack and ship grease over 2,000 miles was impractical.

The need for a soap plant was obvious, so, the Army got the priorities for soap machinery and the Central Pacific Base Command Quartermaster adopted the project. Local businessmen who had the capital and experience were contacted. The Quartermaster Corps was able to get priorities for machinery, the help of skilled mainland technicians, and the

cooperation of local landowners for a factory site. A "Save Grease" campaign was instituted, and finally, the company was promised soap contracts which assured the success of the venture. It is not expected that the armed services peacetime requirements will take all the soap plant's output. In fact, an expansion program has been projected that will enable the Army-fostered plant to supply a large share of the future soap requirements of the Territory of Hawaii.

### Ease Soap Pricing Restrictions

Soap makers who, for one month, replaced the anhydrous soap content of heavy duty household soaps by water-softening materials to the extent required by the Department of Agriculture could sell such soaps at existing price ceilings, it was announced by the OPA, Aug. 7. The period ran from Aug. 7 to Sept. 7. The blanket authority, contained in Amendment 6 to MPR 391, replaced a procedure announced July 24, which required manufacturers to apply individually to OPA for authority to sell at existing ceilings when so reducing the anhydrous soap content. The order cutting anhydrous soap content did not affect toilet soaps or finer toilet soaps in bar, flake, chip or other form. It applied only to soaps with an anhydrous soap content of from 50 to 85

per cent. Manufacturers who proposed to extend the anhydrous soap content beyond the minimum ordered by the Department of Agriculture were to submit a report to the OPA as required in the soap regulation.

### Monsanto Aids Atomic Bomb Work

The part played by Monsanto Chemical Co., St. Louis, in the development of the atomic bomb was revealed for the first time recently by the company in a release dated Aug. 7. Many of the company's leading scientists were connected with the operation, particularly at the company's Dayton plant. Monsanto's principal contribution to the program was research, process development, design of plant and subsequent production of some of the material. Later the company assumed responsibility for the operation of a large part of the Oak Ridge, Tenn., project.

### Young Lever Pittsburgh Mgr.

William L. Young, formerly divisional manager of the central northwest area, with headquarters in Minneapolis, for Lever Brothers Co., Cambridge, was recently appointed Pittsburgh (Pa.) division manager. His jurisdiction covers the tri-state area including Cleveland.

### Report Butter Used for Soap

Use of rancid butter for the production of soap was reported last month by the *New York Times*. A dispatch from Cincinnati indicated that Procter & Gamble Co. had used 90,000 lbs. of spoiled butter in the soap kettle, while another dispatch from Berkeley, Calif., said that 16,000 lbs. of rancid butter had been used there since January.

### Issue Omaha Consumer Survey

The *World-Herald*, Omaha, Nebraska, newspaper, has just issued the first in what will be an annual series of consumer buying surveys, based on the Milwaukee Consumer Analysis as a model. Survey results are based on questionnaires returned by approximately 2,500 typical house-



**T**ASTY BAKING demands a shortening that retains full delicacy of flavor. Even the slightest "turn" in the flavor of this important ingredient cuts down the appetite appeal of the pie or cake.

For that reason, shortening is shipped to commercial bakers and other large users in sanitary steel drums, specially treated to preserve the purity of the product. Wholesale quantities of salad oils and many other easily-contaminated food products are similarly packaged.

To protect their bulk shipments of such food products against deterioration, Rheem supplies many processors with a special, sanitary lacquer-lined steel drum — the

lining to protect flavor freshness, the rugged, flash-welded steel construction to guard against transit hazards. Airtight closures provide a perfect seal.

Inside and out, no other container protects like the steel drum. And Rheem knows how to adapt the steel drum to any practical purpose. If you need steel shipping containers of any size or gauge . . . plain, lithographed or galvanized . . . or with baked protective linings, call upon the nearest RHEEM office. You'll find delivery is prompt from the Rheem nationwide network of plants.

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wives of the Greater Omaha buying area. They analyze consumer buying habits, brand preferences, dealer distribution, etc. Among the soap products covered are toilet soap, laundry soap bars, package soaps, mechanics' hand soaps, toilet bowl cleanser, water softeners, bleaching fluid, synthetic detergents, scouring cleansers, wall cleaners, shampoo, tooth paste, shaving cream, etc. Copies of the Omaha Consumer Analysis are available through the *World-Herald*.

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#### 2nd Quarter Soap Deliveries Down

Deliveries of soap for the first six months of 1945, ending June 30, amounted to 1,561,547,000 pounds of soaps other than liquid, and 2,214,000 gallons of liquid soap, according to a recent release of the Association of American Soap & Glycerine Producers. The figures cover purchases by both the armed forces and for civilians, and are based on the reports of 68 members of the association. Second quarter soap deliveries were slightly less than those for the first quarter, the decline for soaps other than liquid being 6.7 per cent and for liquid soaps, 5 per cent. Second quarter deliveries of other than liquid soaps amounted to approximately 753,711,000 pounds, as compared with 807,836,000 pounds in the first quarter. Liquid soap deliveries in the first quarter were 1,135,385 gallons; in the second quarter they were 1,078,615 gallons. Sales in dollars in the second quarter amounted to 7.1 per cent less than in the first quarter, and were reported as \$102,324,000 for the three months ending June 30, as compared with \$110,148,000 for the three months ending Mar. 31. The amounts of soap made each week, month and quarter in 1944-45 were far greater than they were in the period from 1935-40, the Association reported.

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#### Glycerine Stocks Decline

Stocks of glycerine registered a further decline in June, 1945, and at the end of the month were reported at 64,747,000 lbs. This represented a drop of almost three million pounds from the previous month-end total of 67,713,000 lbs.

#### Dr. Snell Heads N. Y. ACS Section

Dr. Cornelia T. Snell, of the firm of Foster D. Snell, Inc., consulting chemists and chemical engineers,



DR. CORNELIA T. SNELL

Brooklyn, has been appointed chairman of the New York Section of the American Chemical Society, it was announced recently by the Section, following a meeting of its board of directors. Dr. Snell, the first woman to head the New York Section, succeeds Dr. Ross A. Baker, professor of chemistry in the School of Business and Civic Administration of the College of the City of New York. The New York section, with its 4,148 members is the largest of the American Chemical Society's 106 local sections. Dr. Snell has for over ten years been a regular contributor to the pages of *Soap and Sanitary Chemicals*.

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#### Ball Bros. Announce Changes

Edmund F. Ball, a Major in the U. S. Army with almost four years' service, including two years overseas, was elected executive vice-president of Ball Brothers Co., Muncie, Ind., the company announced recently. At the same time, Ball Brothers announced the appointment of Louis Piatt as manager of its commercial closure division. Mr. Piatt had been chief of the Glass and Closure Section of the War Production Board until Aug. 1, 1945, when he resigned to assume his new duties with Ball Bros.

#### Form New Company

A new company, Bubble-O-Products, 1501 Main St., Lynchburg, Va., has been formed to manufacture chemical specialties, cosmetics and kindred items, it was announced recently. N. T. Gorchoff, formerly chief chemist, and W. Marvin Bryant, Jr., formerly purchasing agent, who resigned effective Sept. 1, from Chap-Stick Co., Morton Manufacturing Co. and affiliated companies, will operate the newly formed enterprise.

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#### Soldier's Medal to Lueder's Man

Pfc. Lawrence Bamberger, USA, an employee of the Brooklyn factory of George Lueders & Co., New York, before joining the armed forces, received the Soldier's Medal for heroism, the company announced Aug. 10. Private Bamberger, with two comrades observed an airplane crash near St. Dizier, France, Jan. 16, 1945. Rushing to the scene of the crash, Private Bamberger, disregarding his own safety from the imminent dangers of fire and explosion, broke open the cockpit of the plane and rescued the pilot and navigator.

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#### New Mich. Alkali Cinn. Mgr.

Edward Heiser, for the past two years a member of the Chicago sales force, was appointed manager of the Cincinnati office of Michigan Alkali Division of Wyandotte Chemicals Corp., Wyandotte, Mich., it was announced early this month. Mr. Heiser, who has been with the company since 1927, succeeds G. T. Robinson who has been transferred to Chicago to manage J. B. Ford Division sales in the midwest.

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#### Wm. Smith, Philipp Bros., Dies

William H. Smith, 48, a salesman for Philipp Bros., Inc., Boston, died suddenly while playing golf Aug. 1, at Salem Country Club. He had been with Philipp Brothers for about 15 years, and before that had been with Grasselli Chemical Co. He is survived by his widow, Dorothy Brown Smith; two daughters, Marilyn, 17, and Marjorie, 13; his mother; and two brothers.



# An IMPORTANT Announcement

*Regarding*

## LANOLIN

As "America's Largest Supplier of Lanolin," we welcome the revocation of WFO-76 because, once again, you may purchase *any* quantity of Lanolin and from *any* supplier. It means once again, a return to the principle of purchases on the basis of *value* received, instead of volume received. It means once again, a return to competitive selling . . . the principle of *quality*—not quantity.

### BENEFITS OF WAR RESEARCH

But most important of all, the release of Lanolin means that the Drug, Cosmetic and Allied Industries may now enjoy the fruitful results of several years of Lanolin refining research made necessary by war-time urgency. Malmstrom is proud of its contribution to this research . . . research which brought forward a greatly improved Lanolin . . . a product of greater stability and purity than any grade heretofore available.

We were not able to embody these qualities in the Lanolin sold during the last two years because of limitations in processing time as well as restrictions under the allocation orders and scarcity of wool fat itself. However, within the next few weeks we expect that this greatly improved grade of Malmstrom's Nimco Brand Lanolin will be available in quantity.

If you are interested in product improvement through the use of Lanolin, we urge that you send for testing samples immediately.

## N. I. MALMSTROM & CO.

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DEGRAS • Neutral and Common • Wool Greases

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### Sees European Toiletries Boom

A three-year boom in the European toilet goods industry, which may begin in six months, is foreseen by John C. Gambles, chairman and managing director of the English branch of Northam Warren, Ltd., visiting Montreal, recently. The start of the boom may be delayed by labor, transportation and material shortages, with lack of essential oils, the most likely hold-up. The French lack of soap, and the coal shortage, which makes hot water possible only twice a week, are permitting only weekly baths for people in France, Mr. Gambles is reported as having said. French bathroom shelves are so bare that it will probably take three years to stock them again as they were in pre-war years and during that time the toilet goods industry should boom. Although conditions in Britain are not as bad as they are in France, Mr. Gambles predicted a vast expansion in Britain with the lifting of wartime limitations.

### Merrill Joins Phila. Quartz

Dr. Reynold C. Merrill, formerly with the U. S. Department of Agriculture Regional Laboratory, Albany, Calif., joined the research staff of Philadelphia Quartz Co., Philadelphia, the company announced Aug. 8. Dr. Merrill received his Ph.D. from Stanford University in 1942, where he worked in the field of soap-phase research. His commercial experience includes affiliations with California Cotton Oil Corp. and Lever Brothers Co., Cambridge.

### J. T. Baker Chemical Changes

Appointment of G. B. Hafer, since 1935 sales manager of the laboratory chemicals division of J. T. Baker Chemical Co., Phillipsburg, N. J., as general sales manager of all divisions of the company, was announced by the company recently. Mr. Hafer had also been manager of the Baker Chicago office for several years, and has been with the company for 19 years. Another Baker appointment is that of Charles H. Slater, division sales manager of fine and industrial chemicals, who adds to his present duties those of advertising and pub-

licity supervision. He has been with the organization for 11 years, and at one time was manager of the New York office. The president of J. T. Baker Chemical Co., Herbert H. Garis, who recently completed his 40th year with the firm, was presented with a platinum watch by men of the Baker "Forty Year Club" and representatives of the employee's association at a luncheon at the Hotel Easton, Easton, Pa., recently.



### "Sage" Air Freshener in Debut

A new household deodorant, "Sage Air Freshner" was introduced recently by Sage Laboratories, Inc., New York. "Sage" comes in two sizes: 16 ounces to retail for 98 cents, and six ounces, 49 cents. Packaged in Owens Illinois glass bottles, "Sage" is sold only through drug and department stores. It is price-fixed. A feature of the product is a double wick arrangement. A broad newspaper and radio advertising campaign is planned on behalf of the new product.

### Pennsylvania Salt Products Booklet

A descriptive booklet listing the industrial chemicals and specialties manufactured by Pennsylvania Salt Manufacturing Co., Philadelphia, was issued recently under the title "Pennsalt Industrial Chemicals and Specialties." Copies of the booklet, which contains a list of the industries served by the company, are available on request.

### Wachholtz Joins A. C. Trask

Walter A. Wachholtz, for a number of years connected with McCloskey Varnish Co., Chicago, as a research chemist, and later as superintendent of their Chicago plant, joined Arthur C. Trask Co., Chicago, as technical director, the company announced recently. A graduate of Lehigh University in chemical engineering, class of 1931, Mr. Wachholtz is president of the Chicago Paint & Varnish Production Club.

### Vaughn Heads Wyandotte Research

Dr. Thomas H. Vaughn, for the past six years assistant director of research, was named director of research of Wyandotte Chemicals Corp., Wyandotte, Mich., Aug. 1. Dr. Vaughn succeeds Howard F. Roderick, who has been transferred to special assignments with the sales department of Michigan Alkali division of Wyandotte. Before joining Wyandotte, Dr. Vaughn was head of the organic division of Union Carbon and Carbide Research Laboratories. The company also announced that ground was broken recently for a new carbonate plant at Wyandotte. Production will be increased by 50 per cent by this new plant, which is scheduled for completion in the early spring of 1946.

### Crosby to Build New Plant

Crosby Naval Stores, Inc., Picayune, Miss., announced recently that it had been requested by the Chemicals Division of the War Production Board to start immediately the construction of a wood naval stores plant at De Ridder, La., in order to help relieve the shortage of naval stores products. A high priority rating was issued by the W.P.B. for the construction of the plant, which is expected to be completed by Mar. 31, 1946. The capacity of the plant will be approximately 150,000 (520 pound) drums of rosin per year, which, combined with the Picayune plant, will give Crosby a total annual capacity of approximately 260,000 (520 pound) drums of wood rosin. All grades of wood rosin, pine oils and terpene solvents and chemicals will be produced.



*"He says he likes them seamless"*

**W**E'RE in no mood for arguments with the hosiery trade. All we know is that the Crowntainer, a seamless can, made a hit the moment we put it on the market.

The Crowntainer is actually a steel bottle. It is far stronger than ordinary cans. And because of its shape and type of construction, its uses are innumerable.

The Crowntainer is further proof of "cangenuity"—Crown's ability to

combine ingenuity with can-making skill and experience. This ability is a source of profit for you. Nor is it limited to the production of new kinds of containers; it has many applications of benefit to can users. If you wish a sample, just tell us your problem.

**CROWN CAN**

INDEPENDENT AND HELPFUL

CROWN CAN COMPANY • NEW YORK • PHILADELPHIA • Division of Crown Cork and Seal Company, Baltimore, Maryland

# BIDS AND AWARDS

## W.F.A. Soap Purchases

The following soap purchases were announced in a recent opening for miscellaneous supplies by the War Food Administration, Washington, D. C.: 1,000,000 pounds of laundry soap, Colgate-Palmolive-Peet Co., Jersey City, N. J., 6.4 cents; Armour & Co., Chicago, 2,500,000 pounds of laundry soap at 6.55 cents a pound and 1,250,000 pounds of toilet soap at 11.5 cents a pound; Lever Bros., Cambridge, Mass., 699,999.75 pounds of soap at 14.2224 cents a pound, 300,000 pounds at 13.328 cents, 650,000 pounds at 25.856 cents, 375,000 pounds at 25.684 cents and 125,000 pounds at 4.857 cents.

## Navy Dept. Soap Bids

In a recent opening for miscellaneous supplies by the Navy Department, Bureau of Supplies and Accounts, Washington, D. C., the following bids were received on 44,160 pounds of chip soap: Armour & Co., Chicago, 11.77 cents; Du Rite Chemical Co., Brentwood, Md., 16 cents; Pioneer Soap Co., San Francisco, 11.9 cents; Chicago Sanitary Products Co., Chicago, 11.5 cents; Procter & Gamble Distributing Co., Cincinnati, 16 cents and S. Struke & Son, Pittsburgh, 11 cents.

## Phila. Navy Rust Remover Award

The bid of \$975 by American Chemical Paint Co., No. Ambler, Pa., on 1,500 pints of carbon and rust remover was accepted in a recent opening for miscellaneous supplies by the Philadelphia Navy Yard, Philadelphia. Other bidders and their bids were R. M. Hollingshead Corp., Camden, N. J., 18 cents; Penetone Co., Tenafly, N. J., 20.3 cents and Samuel Cabot, Boston, 24 cents.

## WFA Shaving Soap Purchases

The following awards were announced in recent openings for miscellaneous supplies by the War Food Administration, Washington, D. C.:

18,000 pounds of shaving cream, J. B. Williams Co., Glastonbury, Conn., 93.333 cents a pound; 27,000 pounds of shaving cream, Wm. A. Woodbury, New York, 96 cents a pound and 30,000 pounds of shaving cream at 62 cents a pound; 60,000 pounds of shaving sticks, Vanderway Chemical Specialties Co., Brooklyn, 96 cents a pound.

## Phila. Navy Yard Awards

The following bids were accepted in recent openings for miscellaneous supplies by the Philadelphia Navy Yard, Philadelphia: 600 pounds of hand cleansing cream, Milburn Co., Detroit, 31.25 cents a pound; 200 gallons of transparent wax, Oil Specialties & Refining Co., Brooklyn, 64.8 cents a gallon; 500 gallons of floor wax, Oil Specialties & Refining Co., Brooklyn, 80.5 cents a gallon; 1,100 gallons of degreasing compound, Midwestern Sales Co., New York, \$1,190.20, plus charge for drums; 12 barrels of soaps, Crystal Soap & Chemical Co., Philadelphia, \$273; and 2,000 gallons of insecticide, R. M. Hollingshead Corp., Camden, N. J., \$1,380.

## Misc. Navy Dept. Bids

Among the bidders in recent openings for miscellaneous supplies by the Navy Department, Bureau of Supplies and Accounts, Washington, D. C., were: on 55,750 pounds of deodorant blocks, Puro Co., St. Louis, 21.5 cents; Hockwald Chemical Co., San Francisco, 223 M blocks, 6.13 cents; U. S. Sanitary Specialties Corp., Chicago, 18,583 tubes of 12 blocks per tube, 90 cents; Clifton Chemical Co., New York, 34 cents; Kemiko Mfg. Co., Irvington, N. J., 41 cents and Curran Chemical Arms Co., Chicago, 25.5 cents; on lot 1, 5,175 gallons of (DDT xylene-emulsifying agent) insecticide concentrate solution, and on lot 2, 20,700 pounds of insecticide powder (DDT 10 per cent), Regal Chemical Corp., Brooklyn, lot 1, \$3.35, \$3.45

and \$3.55, and lot 2, 54 cents, 58.5 cents and 62 cents; J. R. Watkins Co., Winona, Minn., lot 2, 11.58 cents, 12.28 cents and 12.98 cents; Pacific Chemical Co., Los Angeles, lot 1, \$1.65, \$1.755 and \$1.86, lot 2, 12.5 cents, 13 cents and 13.5 cents; Baird & McGuire, Holbrook, Mass., lot 1, \$1.78, \$1.89 and \$2; Hockwald Chemical Co., San Francisco, lot 1, \$1.95, \$2.05 and \$2.15; Pittsburgh Chemical Co., Los Angeles, lot 1, \$1.78, \$1.89 and \$1.99; York Pharmacal Co., St. Louis, lot 1, \$2.28, \$2.38 and \$2.48, lot 2, 18.5 cents, 18.8 cents and 19.3 cents; McCormick & Co., Baltimore, lot 2, 13.31 cents, 13.89 cents and 14.48 cents; Paragon Oil Co., Brooklyn, lot 1, \$1.57, \$1.675 and \$1.745; O. E. Linck Co., Montclair, N. J., lot 1, \$1.65, \$1.75 and \$1.85, lot 2, 11.8 cents, 12.3 cents and 12.8 cents; Fuld Bros., Baltimore, lot 1, \$2.35, \$2.50 and \$2.62; R. M. Hollingshead Corp., Camden, N. J., lot 1, \$1.66, \$1.74 and \$1.87; Chadakoff Chemical Products, Brooklyn, lot 2, 16.77 cents, 17.25 cents and 17.75 cents; Monarch Chemical Co., New Orleans, lot 1, \$2.44, \$2.60 and \$2.76 and Northeastern Products, Boston, lot 1, \$1.98, \$2.105 and \$2.23; and on lot 1, 1,303,100 pounds of laundry soap powder, and lot 2, 250,000 pounds of laundry soap powder, Western Chemical & Mfg. Co., Chicago, lot 1, in 50-pound drums, 400 M pounds only, 10.75 cents; Chicago Sanitary Products Co., Chicago, lot 1, 200 M pounds only, \$9.68, cwt; Spazier Soap & Chemical Co., Santa Monica, Calif., lot 1, 303,100 pounds only, 12.25 cents, lot 2, 15.75 cents; Procter & Gamble Distributing Co., Cincinnati, lot 1, 130 M only, 10.54 cents; Lee Soap Co., Denver, lot 1, 150 M pounds, 8.97 cents and Par Soap Co., Oakland, Calif., lot 1, 551,250 pounds, 13. cents.

## Buehler Matchabelli Advt. Mgr.

Leonore Buehler was recently appointed advertising manager of Prince Matchabelli, Inc., New York. Before that she was publicity director of Richard Hudnut, New York, and handled advertising for DuBarry Success School.

# FIXORESINS

A complete line of resinous fixatives designed for use with their respective odor types.

Fixoresins provide lasting power and add to the outstanding characteristics of each odor complex.

They are inexpensive to use, do not discolor, and are absolutely stable.

Other interesting fixatives are our

Civet Paste W artificial

Ambergris W artificial

Animaline W artificial

Muscaro W artificial

Resinoid Moussene

Colonfix

*Write us for assistance  
in your fixation problems.*



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## NEW TRADE MARKS

The following trade-marks were published in the August issues of the *Official Gazette* of the United States Patent Office in compliance with Section 6 of the Act of September 20, 1905, as amended March 2, 1907. Notice of opposition must be filed within thirty days of publication. As provided by Section 14, fee of ten dollars must accompany each notice of opposition.

### Trade Mark Applications

**BRISTOL**—This in upper case, extra bold, black letters for soap. Filed Sept. 3, 1943 by Lanman & Kemp-Barclay & Co., Inc., New York. Claims use since Aug. 10, 1943.

**GLOBO**—This in upper case, extra bold, black letters for soap and shaving cream. Filed Jan. 11, 1945 by John T. Stanley Co., New York. Claims use since Jan. 1944.

**LIMESOL**—This in upper case, bold, stencil letters for dish washing compound. Filed Feb. 14, 1945 by Selig Co., Atlanta. Claims use since Jan. 25, 1945.

**PETROSAL**—This in upper case, bold, stencil letters for synthetic water soluble detergent. Filed Feb. 24, 1945 by L. Sonneborn Sons, Inc., New York. Claims use since June 9, 1944.

**SOLVEPASTE**—This in upper case, bold, stencil letters for soft soap concentrate. Filed Feb. 24, 1945 by L. Sonneborn Sons, Inc., New York. Claims use since 1943.

**SULFATEX**—This in upper case, extra bold, black, stencil letters for detergent and wetting agent. Filed Feb. 24, 1945 by L. Sonneborn Sons, Inc., New York. Claims use since 1935.

**SULFEX**—This in upper case, extra bold, black, stencil letters for detergent and wetting agent. Filed Feb. 24, 1945 by L. Sonneborn Sons, Inc., New York. Claims use since 1935.

**SYNERGENT**—This in upper case, bold, stencil letters for detergent. Filed Mar. 3, 1945 by National Oil Products Co., Harrison, N. J. Claims use since Feb. 17, 1942.

**RELACO**—This in upper case, extra bold, black letters for insecticides. Filed Dec. 16, 1944 by Relaco Manufacturing Co., New York. Claims use since August, 1938.

**MA-WA**—This in upper case, extra bold, black letters for chemical preparation for removing rust, scale, corrosion, etc. Filed Jan. 10, 1945 by Allen G. Mason and Pierson B. Waller, Morganfield, Ky. Claims use since July, 1944.

**RIN**—This in upper case, extra bold, black letters for chemical rust remover and rust preventive. Filed Feb. 21, 1945 by Bell Co., Chicago. Claims use since Jan. 4, 1943.

**DEOSAN**—This in upper case, extra bold, black letters for disinfectant and antiseptic. Filed Apr. 20, 1945 by Howell Co., New Orleans. Claims use since Dec. 28, 1938.

**WHIPZIT**—This in upper case, bold, stencil letters for sweeping compound. Filed Feb. 24, 1945 by L. Sonneborn Sons, Inc., New York. Claims use since 1943.

**PHILLIPS 44**—This in upper and lower case letters on a shield for insecticide. Filed Apr. 13, 1944 by Phillips Petroleum Co., Bartlesville, Okla. Claims use since Apr., 1933.

**PER-OS-CILLIN**—This in upper case, bold letters for bacterial antiseptic and germicide. Filed Apr. 23, 1945 by Hoffman-La Roche, Inc., Nutley, N. J. Claims use since Mar. 30, 1945.

**ONEX-SEAL**—This in upper case, extra bold, black letters for liquid floor polish. Filed May 9, 1944 by Hillyard Chemical Co., St. Joseph, Mo. Claims use since Jan. 1, 1930.

**LINO-PLASTIC**—This in upper case, open letters for liquid plastic floor coating and finishing. Filed Jan. 23, 1945 by Plastic Products, Ottawa, O. Claims use since Sept., 1943.

**POLY-CLENE**—This in upper and lower case, bold letters for metal, glass, tile, linoleum and painted surfaces cleaner and polisher. Filed Mar.

14, 1945 by Poly-clene Co., Elizabeth, N. J. Claims use since Aug. 22, 1944.

**CARS-O-LENE**—This in upper and lower case, bold, script letters for floor washing and cleaning compound. Filed Mar. 31, 1945 by Carsello Chemical Products Co., Chicago. Claims use since June 1, 1940.

**DIPSY-DU**—This in upper case, extra bold, black letters for water soluble powder for washing and sterilizing purposes. Filed Apr. 6, 1945 by Central States Laboratories, Columbus, O. Claims use since Mar. 1, 1945.

**RPN**—This in upper case, extra bold, black letters for insecticides. Filed Nov. 1, 1944 by Smith Manufacturing Co., Utica, N. Y. Claims use since Sept. 1, 1944.

**BACTRATYCIN**—This in upper case, bold letters for a pharmaceutical ointment for use as a bactericide and germicide. Filed Apr. 20, 1945 by Wallace Laboratories, New Brunswick, N. J. Claims use since Mar. 12, 1945.

**TREASURE**—This in upper and lower case, bold, script letters for furniture polish. Filed Apr. 5, 1945 by Koehler Co., Chicago. Claims use since Mar. 1, 1945.

**SEA SUDS**—This in upper case, bold letters for powdered soap for dishwashing, etc. Filed Oct. 20, 1943 by Gamlen Chemical Co., San Francisco. Claims use since May, 1912.

**MARVEL DIP**—This in upper case, bold letters for liquid glass cleaner. Filed Feb. 14, 1945 by C-Z Chemical Co., Beloit, Wis. Claims use since Sept. 12, 1939.

**SUPER CALVOHERB SOAP**—This in upper case letters for soap. Filed Mar. 24, 1945 by Harold R. Woods, Los Angeles. Claims use since Nov. 15, 1944.

**TRADITION**—This in upper case, extra bold, black letters for soap. Filed Apr. 9, 1945 by Parfait, Inc., Chicago. Claims use since Jan. 3, 1943.

**DL**—This in upper case, bold, reverse letters with a bar across the letters, which are on a reverse block for household cleaner. Filed Apr. 13, 1945 by Banite, Inc., Buffalo, N. Y. Claims use since Apr. 6, 1945.

**"NO ESCAPE"**—This in upper case, bold letters for toilet soap. Filed Apr. 14, 1945 by Les Parfums De

# Perfume Specialties for

**L**AUNDERING and scouring soaps — the soaps that are used to keep things spick and span in the home—present an odorizing problem far different from that of the finely scented toilet soap. Theirs is a special problem, influenced not only by the physical character of the finished soap, but by the character of materials used in its composition and by the costs and conditions it will have to meet ultimately in its particular market. By virtue of long, successful experience in this field, our laboratories are fully prepared to render competent, helpful assistance to manufacturers in the selection or creation of odor effects that will **add** to the salability of their products **without** disturbing their costs. May we suggest that you write, 'phone or call on us for preliminary consultation?

LAUNDRY SOAPS

SOAP CHIPS and POWDER

PUMICE and HAND SOAPS

SCOURING POWDER

COLD SOAPS, Etc.

**FRITZSCHE BROTHERS, Inc.**

PORT AUTHORITY COMMERCE BLDG., 76 NINTH AVENUE, NEW YORK 11, N.Y.

BRANCH STOCKS — BOSTON CHICAGO LOS ANGELES ST. LOUIS TORONTO, CANADA MEXICO, D. F.  
FACTORIES AT CLIFTON, N. J. AND SEILLANS (VAR) FRANCE

Dana, Inc., New York. Claims use since Mar. 26, 1945.

**DITRAN**—This in upper case, extra bold, black letters for compound for sterilizing water. Filed Apr. 17, 1944 by Diversey Corp., Chicago. Claims use since Jan. 18, 1944.

**SURJEX**—This in upper case, bold, stencil letters for chemical preparations for removing sludge and carbon from internal combustion engines, etc. Filed June 21, 1944 by Turco Products, Inc., Los Angeles. Claims use since Nov. 1, 1943.

**MICRONIZED**—This in upper case, extra bold letters for calomel and sulfathiazole, medicaments used as antiseptics, germicides, fungicides, parasitocides, etc. Filed Nov. 16, 1944 by International Pulverizing Corp., Morrestown, N. J. Claims use since July 19, 1944.

**MARTE**—This in upper and lower case, extra bold, script letters for bubble bath. Filed Jan. 15, 1945 by Marte Preparations, Chicago. Claims use since Oct. 11, 1944.

**SPARK-O-LITE**—This in upper and lower case, bold, script letters for liquid floor wax. Filed Sept. 15, 1944 by Carsello Chemical Products, Chicago. Claims use since June 1, 1940.

**GABARDINE**—This in upper and lower case, extra bold, black letters for brushless shave cream and shaving soap. Filed May 29, 1944 by Artfield Creations, New York. Claims use since Jan. 3, 1944.

**BONNY**—This in upper case, extra bold, black, stencil letters for detergent compound. Filed Mar. 28, 1945 by R. S. Ghiselin, Chicago. Claims use since Mar. 21, 1945.

**JANIE**—This in upper and lower case, bold, script letters for spot removing compound in compressed stick form. Filed Apr. 3, 1945 by Duncan Mackenzie Co., New York. Claims use since Dec. 22, 1944.

**BAMBOO**—This in upper case, extra bold, black letters for toilet, bath and shaving soaps. Filed Apr. 12, 1945 by Parfait, Inc., Chicago.

**"WHY NOT"**—This in upper case, bold letters for toilet soaps. Filed Apr. 14, 1945 by Les Parfums De Dana, Inc., Inc., New York. Claims use since Mar. 26, 1945.

**ALLURE**—This in upper and lower case, extra bold letters for shampoo. Filed Mar. 25, 1944 by Puritan Drug Co., St. Louis. Claims use since Dec., 1914.

**ASTLAMAR**—This in upper case, bold, shadow letters for insecticides. Filed Apr. 7, 1944 by H. A. Astlett & Co., New York. Claims use since Dec., 1943.

**DYPERINSE**—This in upper case, reverse letters on a diamond shaped background near which are shown fanciful drawings of three infants for antiseptic and deodorant in powder form for prevention of dermatitis in children. Filed Aug. 5, 1944 by Fairfield Laboratories, Inc., Plainfield, N. J. Claims use since June 30, 193 for mark as described above and since Jan., 1930 for "Dyperinse" alone.

**PRELL**—This in upper and lower case, extra bold, black letters for shampoo. Filed Oct. 10, 1944 by Procter & Gamble Co., Cincinnati. Claims Sept. 20, 1944.

**TIMBER!**—This in large and small, bold, capital letters for shampoos. Filed Dec. 23, 1944 by Maurice Handman, New York. Claims use since Nov. 1, 1944.

**VAL-KEEN**—This in upper case, bold letters for radiator cleaning compound, insecticides, household deodorants, household disinfectants, cattle sprays, drain pipe openers, dog repellent, rodent poisons, etc. Filed Mar. 7, 1945 by Oakes & Co., Chicago. Claims use since Sept. 15, 1944.

**LASSIE**—This in upper and lower case, extra bold, black, script letters for shampoo. Filed Apr. 14, 1945 by Lassie Toiletries, Inc., New York. Claims use since Mar. 23, 1945.

**SILENT NIGHT**—This in upper case, extra bold, black letters for shampoos. Filed Apr. 1, 1945 by Countess Maritza Cosmetic Co., New York. Claims use since Mar. 21, 1944.

**BORASCU**—This in upper case, extra bold letters for borate ore used for weed control. Filed May 15, 1945 by Pacific Coast Borax Co., New York. Claims use since Oct. 4, 1943.

#### Trade Marks Granted

414,498. Tooth paste and tooth powder. Filed by Starkist Co., San An-

tonio, Tex., Dec. 4, 1944. Serial No. 477,186. Published Mar. 27, 1945. Class 6.

414,512. Wetting agent. Filed by Lewis National Corp., Boston, Dec. 13, 1944. Serial No. 477,518. Published Apr. 3, 1945. Class 6.

414,534. Insect repellent. Filed by Home Service Co., Deerfield, Ill., Jan. 1, 1945. Serial No. 474,131. Published Apr. 3, 1945. Class 6.

414,593. Polish and cleaner for such interior surfaces as woodwork furniture, etc. Filed by The Mir-A-Lite Co., Chicago, Jan. 24, 1944. Serial No. 466,848. Published May 30, 1944. Class 16.

414,628. Liquid or paste hand cleaner. Filed by Samuel Cabot, Inc., Boston, Nov. 22, 1944. Serial No. 476,753. Published Apr. 3, 1945. Class 4.

414,636. Liquid compounds, soaps and powders for cleansing and polishing glass, metal and unfinished surfaces and for the hands. Filed by The Bullen Chemical Co., Folcroft, Pa., Dec. 4, 1944. Serial No. 477,178. Published Mar. 27, 1945. Class 4.

414,640. Concentrated soap base for washing dishes, woodwork, floors, clothes and for general washing and cleaning. Filed by Milwaukee Lubricants Co., Milwaukee, Dec. 12, 1944. Serial No. 477,474. Published Apr. 3, 1945. Class 4.

414,649. Shaving cream. Filed by Day Chemical Co., Newark, N. J., Dec. 29, 1944. Serial No. 478,035. Published Mar. 27, 1945. Class 4.

414,651. Liquid soap and cleaning compounds for shampooing rugs, upholsteries and draperies. Filed by Home Service Co., Deerfield, Ill., Jan. 1, 1945. Serial No. 478,130. Published Apr. 10, 1945. Class 4.

414,723. Disinfectant and insecticide. Filed by James Manufacturing Co., Peoria, Ill., May 3, 1944. Serial No. 468,898. Published Apr. 17, 1945. Class 6.

414,726. Tooth paste. Filed by Vio-Glen Chemical Co., Kansas City, Mo., June 13, 1944. Serial No. 471,189. Published Oct. 24, 1944. Class 6.

414,733. Shoe grease. Filed by Alfred J. Georg, Port Angeles, (Turn to Page 125)





## The future of fragrances

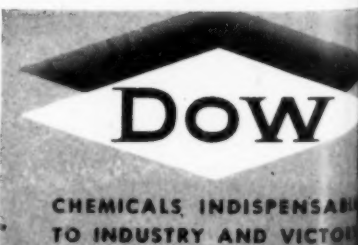
The artist in perfumes envisions a new world of fragrances still unknown today . . . fragrances which his creative skill will translate into reality in days to come. And Dow is helping him to make these plans come true . . . by placing at his disposal an ever-widening selection of fine chemicals and Synthetic Aromatics.

The quality and uniformity of Dow Synthetic Aromatics available today reflect a long record of experience in precise chemical manufacture. True to its tradition of progress, Dow is applying its research facilities to the perfection of still newer aromatics to enrich the possibilities of tomorrow's creative perfumery.

**DOW AROMATIC PRODUCTS:** Coumarin, Cyclotene, Diphenyl Oxide, Diphenyl Methane, Gardanthrol, Indol, Methyl Anthranilate, Methyl Phenyl Carbinyl Acetate, Methyl Salicylate, Palatone, Phenyl Ethyl Acetate, Phenyl Ethyl Alcohol, Styrene P-100, Sylvenol, and others—

**THE DOW CHEMICAL COMPANY, MIDLAND, MICHIGAN**  
 New York • Boston • Philadelphia • Washington • Cleveland • Detroit • Chicago • St. Louis  
 Houston • San Francisco • Los Angeles • Seattle

*Synthetic*  
**Aromatic**  
*Chemicals*





As of August 27, 1945

**T**HE unexpectedly quick ending of the war with Japan, bringing with it the termination of government controls on a host of the soap maker's raw materials, does not mean the immediate end of his problems, even as far as raw materials are concerned. In the first place, the soap-maker's principal worry all during the war—fats and oils—is still with him, and a number of different, though authoritative, sources are predicting no let up until at least next spring or summer. Unfortunately, the shortage that characterizes the condition of fats and oils that are normally imported is equally applicable, though not to as great an extent, to domestic production of fats and oils.

Meanwhile, in view of the continuing shortage of fats and oils the need to collect and turn in waste household fats continues, according to a recent release of the American Fat Salvage Committee. In a telegram to Roy W. Peet, of Colgate-Palmolive-Peet Co., Jersey City, N. J., and chairman of the Committee, Secretary of Agriculture Clinton P. Anderson pointed out that we are "still alarmingly short of fats and oils. Because we will continue to be so seriously short of these essential commodities for many months to come, it is just as important now as during the war to save every bit of used fat. . . . I urge you and all members of your committee to help us drive home this vital necessity in every possible way." With the promise of more meat in a few

months, indications are that there will be a corresponding increase in salvage and grease at the source. However, it has been stated that it will be some time before imports of fats and oils from the South Pacific can be resumed. It may be many months before oil plantations are back in production and before workers and shipping are available. Although the government is cognizant of the need to collect used fats and other materials salvaged during the war, it was announced late in August that the government is withdrawing its support from the program by having the War Production Board terminate its supervision of fat (and other products) collection. After Sept. 30, the date set for WPB's withdrawal from the picture, collection of salvage materials will be carried on

## CRESYLIC ACID — FORMALDEHYDE AROMATICS

Phenyl Ethyl Alcohol  
Methyl Acetophenone  
Acetophenone  
Geranyl Acetate  
Yara Yara

Phenyl Ethyl Acetate  
Amyl Cinnamic Aldehyde  
Benzyl Acetate  
Benzophenone  
Nerolin

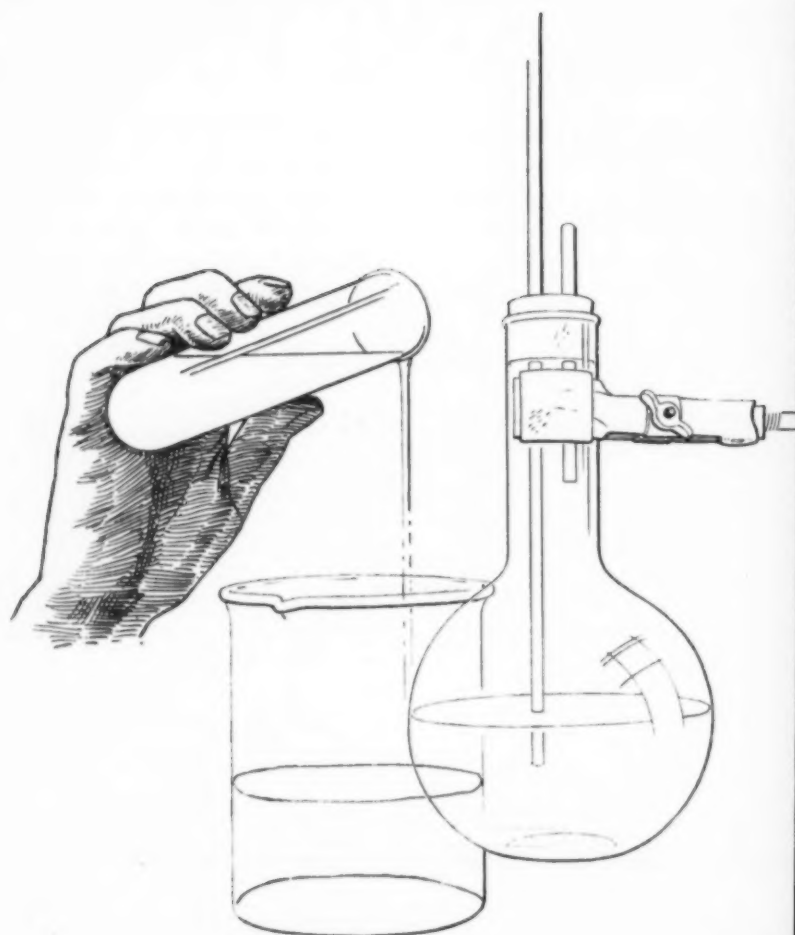
For Soaps, Perfumes, Cosmetics, etc.

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NEW YORK, N. Y.

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TORONTO, CANADA

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180 MADISON AVE., NEW YORK



## KOPPERS coal tar chemicals

**KOPPERS COMPANY, INC.**

TAR and CHEMICAL DIVISION

PITTSBURGH 19, PA.

**KOPPERS**

THE INDUSTRY THAT SERVES ALL INDUSTRY

Benzol

Toluol

Xylol

Phenol

Cresols

Xylenols

Cresylic Acid

Frozen Neutral Oil

Tar Acid Oils

Pyridine

Picolines

Lutidines

Quinoline

Naphthalene

Creosote Oil

Sulphate of Ammonia

by civilian voluntary organizations and interested industries.

#### Philippine Copra May Help

The possibility of a revival of the Philippine copra industry was predicted in Manila just before news of the Jap surrender last month by a representative of the Foreign Economic Administration's mission to the Philippines. Lack of transportation was said to be the greatest bottleneck holding up the flow of 800,000 available tons of copra. The FEA representative is reported to have said that it would be possible to ship 200,000 tons of copra to the United States in the coming year.

Relief in the form of tallow and greases imported from Australia and New Zealand was reported during the month, but against this must be balanced the need for large quantities of fats and oils for European relief work.

The lard and grease picture was summarized in a report from Chicago Aug. 26, that the end of the war in the Pacific has made little dif-

ference in the fat and oil situation, and supplies of lard and greases remain far below needs. No appreciable change in this condition is expected for some time to come, despite lessened Army requirements and setaside requirements. The bulk of the business in lard is reported to be in relatively small quantities at the higher ceiling price allowed for such business. Hogs of heavy weight continue to be marketed, chiefly because about a quarter of the run has been sows. Shipments of the latter to market are expected to fall off soon.

#### WPB Lifts Many Controls

Among the controls revoked on various items with which the maker of soap and sanitary chemicals is concerned were those on: chlorine, tar acids, coal tar, formaldehyde, isopropyl alcohol, DDT, alkyl amines, naphthalene, synthetic organic detergents, pine oil, pine tar, carbon tetrachloride, trichloroethane, tetra sodium pyrophosphate, tri sodium phosphate, titanium and zinc oxide, soda ash and silicates, sodium metasilicate, cello-

phane, steel drums, wooden shipping containers, fibre shipping containers, cylindrical fibre shipping drums and wax paper. All excepting containers, synthetic organic detergents, and cylindrical fibre shipping drums had their controls lifted effective Aug. 31. Restrictions on rosin were not lifted entirely, but relief is expected with the issuance of an amended order which will change "permitted quotas" for rosin use to become "total quotas," rather than the present arrangement of quotas for civilian use after preferential orders for military and government use have been filled. This should mean substantial relief for soap makers. An amendment of Aug. 9, permits users a five months' inventory of rosin based on current rate of use, instead of three months.

The Department of Agriculture terminated War Food Order 81, which controlled the distribution of oil of peppermint, effective Aug. 22. Pyrethrum, rotenone, thallium chemicals and arsenic have also been taken off allocation recently.

## RAW MATERIALS FOR THE SOAP INDUSTRY

### COCOANUT OIL

VEGETABLE OIL FATTY ACIDS      ANIMAL AND FISH OIL FATTY ACIDS

THE LAMEPONS—Unique surface active agents for cosmetic and industrial use

QUADRAFOS—A stable polyphosphate for water conditioning and effective detergency

Caster Oil  
Corn Oil  
Cottonseed Oil  
Olive Oil

Olive Oil Foots  
Peanut Oil  
Rapeseed Oil  
Sesame Oil  
Boric Acid  
Modified Soda

Tall Oil—  
Refined & Crude

Soya Bean Oil  
Fatty Acids  
Lard Oil  
Neatsfoot Oil

Silicate Soda  
Metasilicate  
Tri Sodium Phosphate

Oleo Stearine  
Stearic Acid  
White Olein  
Tallow

Grease  
Lanolin  
Caustic Soda  
Soda Ash

Di Sodium Phosphate  
Chlorophyll  
Superfating Agent

Borax  
Caustic Potash  
Carbonate Potash  
Sal Soda

### Dry Alkali Mixtures

We compound your formulas. Let us handle this operation for you.

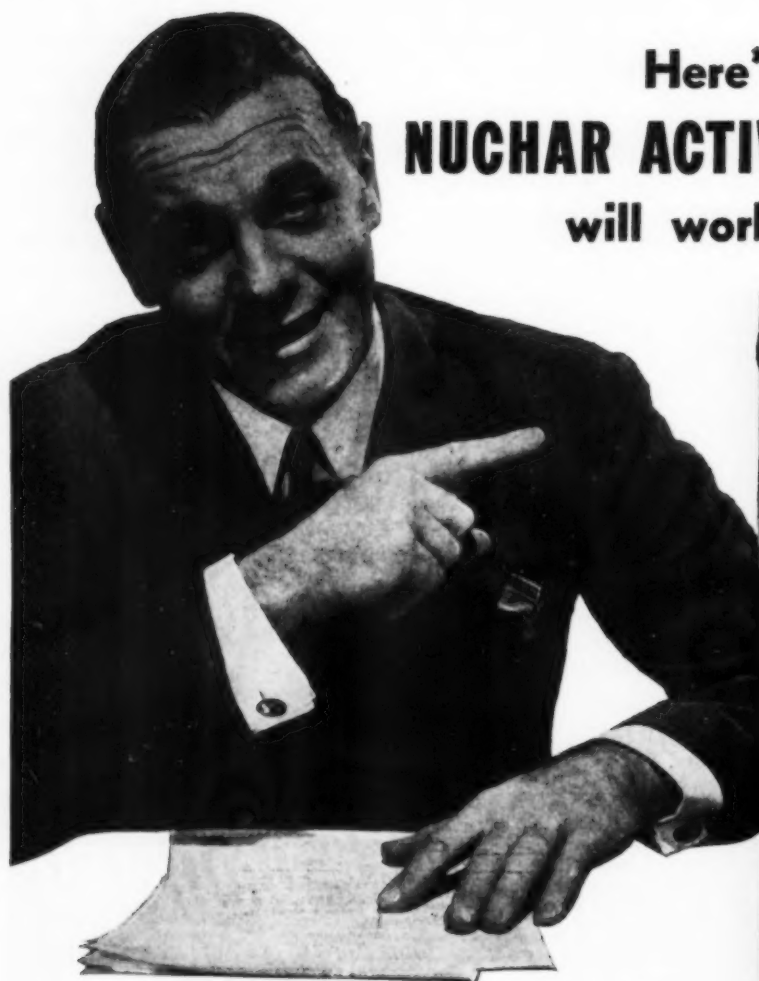
Petrolatum  
White Mineral Oil

## WELCH, HOLME & CLARK CO., Inc.

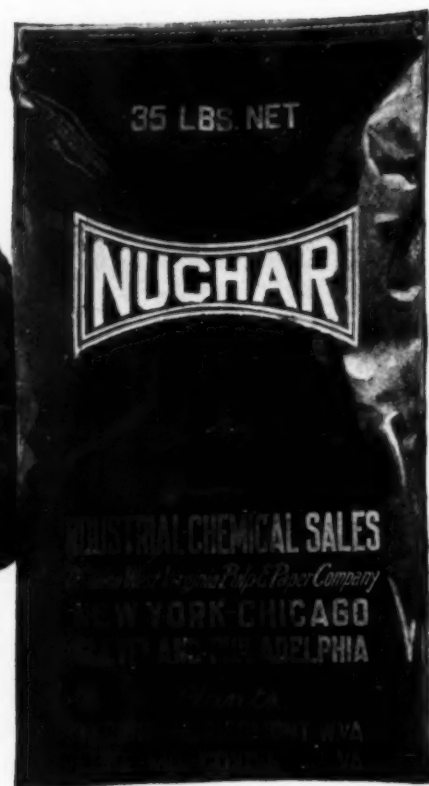
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NEW YORK CITY




Here's How  
**NUCHAR ACTIVATED CARBON**  
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The soap industry is putting to work in its plants the tremendous surface area of Nuchar Activated Carbon for removing impurities from oils, fats and waxes.

Soap manufacturers rely on Nuchar Activated Carbon as an effective and dependable means of purification *by adsorption*, to remove unwanted odors, colors and tastes in their products. Because it is chemically inert, Nuchar Activated Carbon will free 'off' oils, fats, waxes of unwanted impurities without causing any molecular alteration or chemical reaction.

Your technical staff will find activated carbon a useful tool in your processes. Consult with us regarding the quality of Nuchar best fitted to your needs and we will send you a sample.

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# PRODUCTION **SECTION**

## Modern Soap Shampoos

FOR the compounder unskilled in soap making, ready made coconut soft soap may be made the basis of a shampoo liquid, together with a little olive-oil soft soap. This gives an excellent shampoo when dissolved in water or in a mixture of water and alcohol. Potential additives include small amounts of "Calgon," potassium carbonate, glycerine, etc.

Basic formulae are illustrated by the following:

	Parts
1. Coconut potash soap.....	35.0
Olive oil soft soap.....	10.0
Glycerine .....	5.0
Alcohol .....	10.0
Perfume .....	0.2
Distilled water .....	40.0
	Parts
2. Coconut oil .....	14.0
Olive oil .....	3.0
Castor oil .....	3.0
Caustic potash, stick.....	4.7
Glycerine .....	2.0
Industrial alcohol .....	4.0
Calgon .....	1.0
Perfume .....	0.4
Distilled water .....	68.0

In formula No. 1, the soap is dissolved in half the given quantity of hot water, the rest of the water being added cold. The glycerine and alcohol, to which the perfume has been added, are then stirred in. The resultant liquid soap is stored for 3 weeks, and the clear liquid drawn off from any sediment. It is filtered bright through diatomaceous earth.

In formula No. 2, in which the soap itself is prepared, the potash is dissolved in 9 parts of the water and allowed to stand for a few hours. The clear lye is then run slowly into a steam-jacketed pan containing the previously melted oils. The lye must be added carefully and the rate of addition controlled to prevent excessive foaming. If the batch threatens to

overflow, cold soft water is sprayed over the mass. After stirring until reaction appears to be complete, the pan is covered and allowed to stand for an hour.

The soap should now be tested for incomplete saponification or excess alkalinity. Dissolve about 2 grams of soap sample in 6 grams of distilled water with warming. Turbidity shows the presence of unsaponified fat, in which case further caustic potash should be added. To test for free alkali, add 2 drops of a 1 per cent phenolphthalein solution to a sample solution. If a decided red color results, add coconut or castor-oil fatty acids.

More accurately, the test sample is dissolved in neutral alcohol and titrated to neutrality with 0.1 Normal potassium hydroxide or standard acid as required. If off appreciably from neutrality, calculate the amount of lye or oils required and add these to the kettle. Continue the boiling and repeat the analysis.

If nearly neutral on the alkaline side, and a clear appearance indicates little or no free oil, boiling may be continued without any adjustment. If a sample drawn later checks the previous one, the reaction has gone to completion.

After sampling and correction, the remaining portion of the charge is added slowly and gradually. If large quantities of water are added, lumps will form and float about in the thin soap solution. These lumps will disappear only after prolonged boiling and stirring. If possible, the speed of stirring should be gradually reduced as the soap gets thinner, down to about 20 r.p.m.

The finished soap is allowed to cool in the kettle, when it should be drawn off and stored in vats. The longer it is kept, the clearer it becomes. Filtration subsequently is desirable. S. P. Jannaway. *Perfumery & Essential Oil Record* 36, 179-82 (1945).

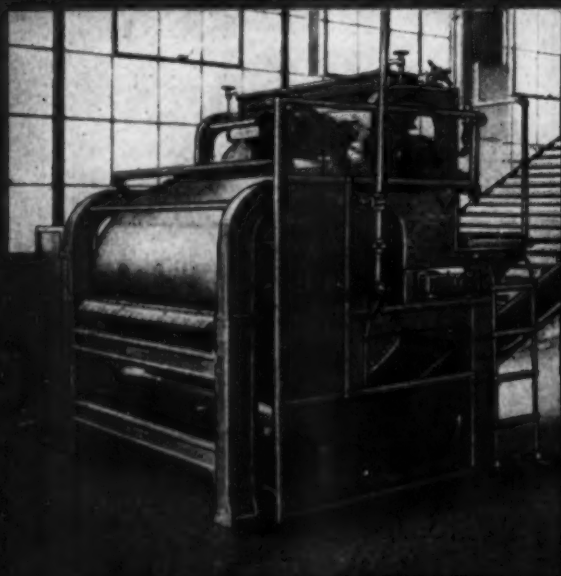
### Foam Drainage

The rates of drainage through foams can be approximated by an equation of the type obtained from considering the analogous but much simplified flow of liquid in a vertical capillary. The rate of flow of 0.1 per cent of sodium lauryl sulfate containing 1 per cent of sodium sulfate through a foam decreases progressively when the temperature is changed from 40° to 20° C.

Decrease in bubble size will decrease the rate of flow of liquid through foam. For two bubble sizes whose volume ratios were about 6.5 to 1, the rates of flow differed by a ratio of 2.5 to 1.

Methods of evaluating foam stability entirely from observations of relative foam drainage of liquid are not generally valid and can be misleading. The rate of flow of liquid through foam is influenced by the size of the bubbles and the bulk and surface viscosities, so that relative drainage rates do not evaluate foam stability under the same conditions, when the bubble size is not controlled or is changing in an unknown way, or if the surface and bulk viscosities vary. Foam drainage is analogous to the creaming of an emulsion, which is not a measure of emulsion stability. G. D. Miles, L. Shedlovsky and John Ross, *J. Phys. Chem.* 49, 93-107 (1945).

# *Sargent's latest ...* **SOAP CHIP DRYER**



**Y**OU will be interested in seeing two views of a recent installation of the latest SARGENT Dryer and Chilling Roll as set up and operating.

- Our engineers have developed a Roll and Dryer that delivers just what the Trade demands . . . extremely thin, smooth chips!
- The drives are of the variable speed control type. Designed for compactness and accessibility. The unit requires only the minimum of steam and power.
- Write to SARGENT today for complete information on this new machine.

**C. G. SARGENT'S SONS CORPORATION • GRANITEVILLE, MASSACHUSETTS**

# Tide Surveys Dentifrice Market; Pastes Outsell Powders 3 to 1

OF the 500 or more dentifrices on the market today, nearly 75 per cent of all sales are pastes, according to a survey of the dentifrice market, published in the Aug. 15, issue of *Tide*, magazine of advertising. Tooth powder ranks second, accounting for 22 per cent of the total, while liquid dentifrices make up the remaining four per cent of the total picture. Powder sales have shown an increase from 21 to 22 per cent for 1945 to date, and paste sales dropped one per cent. In 1943, powder sales were 26 per cent of the total and paste sales were 68 per cent. The *Tide* survey sets 1860 as the date of the first year dentifrices were marketed. As to the size of the dentifrice market, the survey indicates that in 1943 the civilian market was \$55,000,000, while in 1944 it totaled \$58,000,000 and expectations are that this year it will be around \$60,000,000.

As to brand preference, *Tide's* report shows that a few widely advertised brands do most of the business. Of the total market, "Ipana," in paste form only, "Colgate" paste and powder and "Pepsodent" paste and powder control 45 per cent. Among the leaders in the paste field, representing 60 per cent of all paste sold, are "Ipana," "Colgate," "Squibb" and "Pepsodent." The breakdown in powder dentifrices shows "Dr. Lyons," "Colgate" and "Calox" doing 72 per cent of all the powder type dentifrice business. In the liquid dentifrice field, one unnamed brand, probably Procter & Gamble's "Teel," represents 80 per cent of all the liquid sales.

The eastern section of the United States was largest of the four purchasing areas. Here, 30 per cent of the sales of dentifrices are made. The mid-west is second with 27 per cent, while the west and south followed in that order, having percentages of 23 and 20 per cent respectively. Powder was reported to be the most popular type of dentifrice in the east,

mid-west and west, while paste held that distinction in the southern market. In cities of 100,000 population or over, powder represented the largest percentage of the market, although paste was more popular in cities from 100,000 down to 10,000. In farming communities liquids held an edge over paste and powder.

The average sized package is 2.6 ounces, and costs about 30 cents. Powder at nine cents is cheapest per ounce, but is sold in the largest package: 3.2 ounces for 30 cents. Liquid at 13 cents an ounce is the most expensive dentifrice and comes in the smallest package: 2.1 ounces for 26 cents a package.

Other salient statistics include the fact that dentifrices sell at a fairly even rate all year round, although there is a slight drop in summer months; most dentifrices are sold through drug stores, which account for 67 per cent of total sales, while dime stores (13 per cent), department stores (10 per cent), miscellaneous (seven per cent), canvassers (two per cent), and mail orders (one per cent) follow in that order; and finally, the *Tide* survey indicates that newspapers and radio are the principal mediums of advertising for the two leading brands.

## Separation of Fatty Acids

By employing a solvent-fatty acid ratio of 4 to 1 by weight and conducting crystallizations at 5° F. or lower from acetone, and —5° F. or lower from petroleum naphtha, the liquid fatty acids from unhydrogenated cottonseed oil could be reduced to below —2° C. in titer and to below about 3 per cent in saturated acid content. Under these conditions there was no appreciable crystallization of oleic acid.

At a solvent-fatty acid ratio of 6 to 1 and the same temperatures and solvents, equally good separations could be made of the saturated fatty

acids present in the mixed acids from hydrogenated cottonseed oil. Separation of isooleic acids from the fatty acids of the hydrogenated oil took place over a wide range of temperatures, beginning at 35° F. in acetone and at 25° F. in petroleum naphtha, and being incomplete in either solvent at —15° F. However, the bulk of the higher melting isooleic acids was precipitated as the temperature approached —5° F. in acetone and —15° F. in petroleum naphtha. W. S. Singleton, M. Lambou, and A. E. Bailey. *Oil & Soap* 22, 168-74 (1945).

## Built Detergent

A built detergent comprises 40-50 parts by weight of soda ash, 25-33 of tetrasodium pyrophosphate, 2-7 of trisodium phosphate, 2-7 of sodium metasilicate, and 1-3 parts of a solid organic detergent free from higher fatty acids and their salts. W. B. Hicks and D. J. Saunders, to The Solvay Process Co. Canadian Patent No. 428,410.

## Bottle Cleaning Alkalies

For cleaning bottles with an alkaline mixture, when the bottles are later to be rinsed on a conveyer in hard water, scale formation is prevented by addition of pyrophosphate and orthophosphate to the caustic soda. A suitable range of compounds is the following:

Caustic soda .....	70-90%
Sodium pyrophosphate, anhydrous .....	20-4
Crystalline sodium orthophosphate .....	10-2

H. H. Hull and J. Janota, to The Diversey Corporation, Ltd. Canadian Patent No. 427,652.

## Sulfonated Hydrocarbons

Surface-active agents are produced by causing a saturated hydrocarbon in the liquid state to react with sulfur dioxide and chlorine. The sulfonyl chlorides are extracted with liquid sulfur dioxide. The solvent is removed and the resulting products are hydrolyzed. C. O. Henke and L. M. Schofield, to Canadian Industries, Ltd. Canadian Patent No. 427,348.

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*A New More Powerful—*  
**PLODDER**  
*Announced by* **HOUCHIN**

Designed to handle the special Army and Navy Soap, (which often changes consistency four times, from semi-liquid to concrete hardness in a twenty minute period during manufacture).

*Huskier drive—alloy steel shaft, and heavier gears — are used in these plodders — features of importance to all soap manufacturers, because they prevent many breakdowns caused by excessive stiffness of materials during processing.*

Made in sizes 4", 8" and 10"

*A picture taken of this new plodder will be shown in a forthcoming advertisement*

Included in the Houchin line are:—

Chippers, Amalgamators, Mill Plodders, Slabbers, Cutting Tables, Crutchers, Can-Top Sealers, etc.

**HOUCHIN**  
**MACHINERY COMPANY, INC.**

FIFTH AND VAN WINKLE AVENUES

HAWTHORNE

NEW JERSEY



## PRODUCTION

# Clinic

By DR. E. G. THOMSEN, PH.D.

RECENTLY it was my privilege to take a rather long trip and visit a number of plants in various parts of the country. The outstanding impression from these visits is that some smaller plants, especially, are planning considerable expansion or are already in the midst of enlarging their facilities. This applied to sanitary products plants, soap plants, insecticide plants and farm line plants. Their aim seems to be to get machinery, equipment and buildings at the earliest possible moment in order to be ready for future business.

With this condition existing it has been a sad state of affairs to find makers of machinery and equipment in many cases unprepared to give prices, delivery dates or definite information regarding their wares. Perhaps they have not been in a position to furnish this information and do not want to admit it. Then again, business in other directions has come so easy to them during the war years, that they may not have been too interested in new business.

Again they may have been so overworked by shortage of help, together with government restrictions or record-keeping that they have been unable to give inquiries proper attention. We know of several inquiries for equipment which have brought a reply to wait for the end of the war and then write again. The snap, courtesy and avidity of peace time business attitude has certainly been lacking not only in the machinery business but in other fields as well.



Some of us remember that there was also a war thirty years ago. Following this war we had a depression, then a business boom, followed by a long and anxious depression. During those depression years gratitude for past favors often was the deciding factor as to whom an order went. We frequently heard the statement, "They took care of us during the war and when goods were hard to obtain. We don't forget that service and see no reason why we should place our business elsewhere now." In certain cases this buying policy was pursued even though the price paid was a bit higher. It is probable that during the past few years good will of this nature has been built up that will be a valuable business asset in future and depression years. It is not cultivated, however, by the policy pursued by a certain manufacturer whose office received a long distance call from a Chicagoan regarding some hard-to-get equipment that was

badly needed. About a week later he received a letter signed by and initialed by a stenographer, from an officer of the company, stating that the request had just come to his attention and that he was sorry that war conditions, lack of material and labor shortages, made it impossible to accommodate him. This Chicagoan then went to a competitor. He too was short of help and raw material, but he gave some constructive advice to fit the emergency and expressed the hope that following plant reconversion he might be able to accommodate the buyer shortly thereafter with the needed equipment. It does not take much stretch of imagination to predict who will get this buyer's future business. Labor shortages and too much government business or interference will not continue forever, but helpful courtesy is quite enduring.

If the law of averages applies, certain of these smaller, more or less now unknown companies will grow in the years ahead. They are usually managed by aggressive, far-seeing, capable men with an ambition to succeed and to enlarge. In many cases they are a one man show now but may be valuable customers with many employees five years from now. Wise executives pay more than usual attention to the little fellows even in these busy years. Working closely with them at all times will pay dividends in the years ahead.

### Centrifugal Pumps and Impellers

The Deming Company of Salem, Ohio, have sent us their booklet entitled "Facts You Should Know About Centrifugal Pumps and Impellers." This information is novel in that, while The Deming Company makes most of the types of pumps described, the facts presented are just as applicable to pumps made by competitors. This makes the book the more desirable and helpful as an addition to the machinery files of production men who are interested in these pieces of equipment.

The work covers in detail such subjects as fundamental hydraulic law, types of centrifugal pump impellers,

"IT'S FASTER"

"IT LASTS LONGER"

"IT'S MORE EFFICIENT"

TRUE! ALL THE REPORTS  
YOU HEAR ABOUT  
KIEFER AUTOMATIC  
ROTARY VACUUM  
FILLING MACHINE

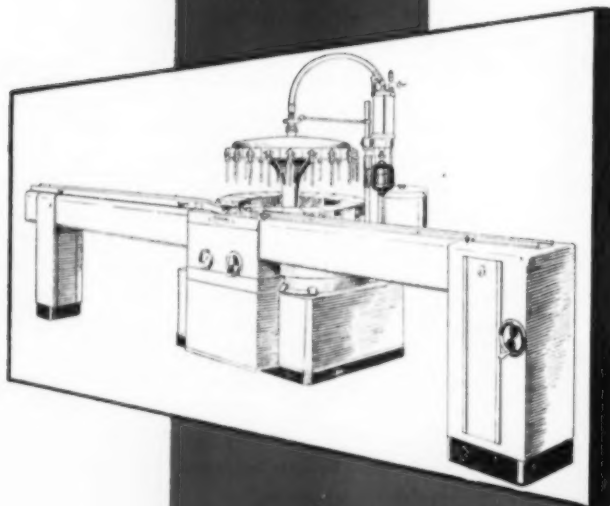
are based on FACT . . . on year-in-and-year-out performance in plants throughout the U. S. A. and in many foreign countries.

This "Automatic Rotary" DOES fill all liquids — light, heavy, foamy, syrupy — in less time.

It DOES do a more efficient job judged — by the day, season or year.

It DOES pay for itself within a mighty short time but just how long depends on your particular filling speed.

Deliveries made when permissible. Bookings are growing heavy.



*The Karl Kiefer Machine Co.*

Cincinnati, U.S.A.

New York  
Boston  
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San Francisco  
Seattle  
Los Angeles

Completely automatic, semi-automatic, hand-fed equipment to clean, fill, close and convey jars, bottles, tins, collapsible tubes.

Also

Filters • Pumps • Percolators

London, England

side single suction and double suction arrangements, hydraulic balance, mechanical, static and dynamic balance, and split pump cases. Well designed diagrams and photographs illustrate these data to add considerable value to the facts presented. In many cases "pump failures" are due to improper application or unfamiliarity with the principle underlying the operation of pumps. With the aid of this booklet, the applications and selection of centrifugal pumps is explained in full. It should be obtained and studied by anyone having a pumping problem. It is interesting to know that Deming Engineers estimate that 90 per cent of all centrifugal pumps are general purpose types, used for head pressures under 100 lbs. and capacities up to 2,000 gallons per minute.

#### Flow Measurement

Fischer & Porter Co., Hatboro, Pa., will send anyone interested in a sound technical discussion of accurate flow measurement of gases or liquids, a copy of their new edition of "Theory of the Rotameter" upon application. This book covers the history and technical development of area-type flow meters and tells how the "Rotameter" overcomes the effects of viscosity and density in the measurement of flow rate. Engineers who are interested in flow measurement will wish to obtain a copy of this interesting and revealing work. This Company has also recently issued their Catalog 43-E which describes their line of "Armored Rotameters."

#### Mixing Equipment

Struthers, Wells Corp., Warren, Pa., are headquarters for a complete line of processing equipment. Their catalogs list well over one hundred pieces of machinery this company specializes in. Included are such items as agitators, autoclaves, converters, evaporators heat exchangers, kneading machines, mixers, propellers, re-torts, soap crutchers, solvent recovery plants, stills, tanks, vegetable oil refining equipment and numerous others. They also operate the Titusville Boiler Division for the fabrication of all types of boilers. Their organization comprises engineers, technicians, crafts-

men and business executives and their facilities for building intricate and exacting equipment are equal to the best in this country.

Their line of mixing equipment includes agitators and drives for every purpose. If the standard line is not suitable, custom built mixers are readily built for special requirements. The agitators used for the mixers include single and double paddle types with or without hinged scrapers, propeller (swift working) ones, single and double agitators, turbines, crew and thimble type, and combinations of these types. The mixers may be built from steel, stainless steels, nickel, copper, aluminum and other metals. The standard driveheads may be heavy duty bevel gears, spur gears or direct connected motors with speed reducers if required. With many years of experience in their fields, Struthers, Wells have the facilities and knowledge to solve difficult mixing problems. Their Bulletin No. 13 re Mixing Equipment is a handy catalog to have in one's files.

#### Government Surplus Property

It is advisable for manufacturers to write to the nearest office of the Reconstruction Finance Corporation or directly to Washington, D. C. for the booklet "How to do Business with the R.F.C." Through the information outlined in this book it is possible to learn how to buy government surplus property under 28 general headings from the R.F.C. Much equipment that is badly needed for civilian production at this time lies in government stores. Some of it may be available at once.

#### Booklet on Crotonic Acid

Shawinigan Products Corp., New York, has just announced their brochure—a 30-page, with cover, plastic spiral bound booklet—on "Crotonic Acid." In addition to a foreword about the new product and a photographic view of the entrance of the research laboratory, at Shawinigan Falls, Canada, there are five sections or chapters. The first deals with "Molecular Structure and Isomerism"; the second covers "Physical Constants and Properties"; the third discusses Crotonic Acid's

"Chemistry and Typical Reactions"; the fourth, "Possible Uses and Patent Literature" and the fifth and final section is devoted to a listing of references.

#### New Adhesive Booklet

A new, 12-page booklet, "3-M Adhesives in Industry," that is of interest to users of sealers, coating or insulating compounds, has just been announced by Minnesota Mining & Manufacturing Co., St. Paul. The booklet illustrates adhesive operations in many different industries, methods of application and a listing of the physical properties. Copies are available, free, by writing the advertising department of the company.

#### Light from Floors Booklet

Universal Atlas Cement Co., subsidiary of U. S. Steel Corp., New York, has issued a 24-page, two-color, fully illustrated booklet, "Light from Floors," the company announced last month. Reedited and rearranged for the reconversion period, the text includes source material prepared in collaboration with authorities on illumination, design and construction. Sections of the book are devoted to recommended practice for floor construction, surface treatment and maintenance.

#### First Issues "First Facts"

The summer-fall issue of "First Facts," house-organ of First Machinery Corp., New York, was issued recently and contains a complete inventory and stock list of new and used machinery available from the company. Featured in this eight-page booklet are a number of illustrations of new and used machinery and equipment.

#### New Hooker Products List

Hooker Electrochemical Co., Niagara Falls, N. Y., has just announced issuance of a new Hooker General Products List, Bulletin 100. It is a file sized folder containing brief information on nearly 100 chemicals, giving descriptive details, chief uses and shipping container information. Several new chemicals are listed for the first time in this new booklet.



### Tufcrete Resurfacer Booklet

Tufcrete Co., Des Moines, Ia., recently announced a new, six-page folder which describes the uses of "Tufcrete" resurfacer. "Tufcrete" is an asphaltic-base liquid, which when added to a concrete mixture, will bond to concrete, wood or other floors, both bottom and edges. It can be installed by ordinary labor either indoors or out, on worn floors of wood, concrete, brick, asphalt, stone, etc., for patching or a completely new surface.

### Continental Can Expands

Expansion of manufacturing facilities at two Continental Can Co. plants was announced by the company recently. Plans have been completed for two new buildings to be added to the Container Co. plant of Continental Can Co., at Van Wert, O. In addition, construction contracts have been placed by Container Co., division of Continental Can Co. for an addition to the Reading, Pa., plant, which will double the present operations.

### WAX FLOOR POLISHES

(From Page 40)

	Parts
Carnauba wax .....	13.2
Oleic acid .....	1.5
Triethanolamine .....	2.2
Shellac .....	2.0
Borax .....	1.0
Ammonia (28%) .....	0.32
Water .....	99.0

As already indicated, and as is evident from the above, there is a growing appreciation of the hazard factor in the slipperiness of wax films on floors. This phase of polish formulation is now under quite extensive investigation (6,19) and it is to be hoped that means will be devised to further raise the safety factor of wax floor finishes. Of course a good deal of this hazard is psychological, but there is no question but that many physical or chemical factors enter the picture.

Considerable investigative work has been done and valuable information obtained. Some years ago, for example, Gehm (20) found that gloss and slipperiness of waxed linoleum are influenced to only a slight degree by

the type of linoleum, temperature changes and moisture. On the basis of his findings, he recommended the use of higher proportions of carnauba wax and a reduction in the amounts of paraffin waxes. Today the inclusion of high proportions of carnauba wax is common practice, and it is known that the purest grades of carnauba wax are not themselves slippery in character. (8)

It has long been common practice to incorporate shellac in wax polishes to reduce slipperiness. Small amounts of natural and synthetic resins have also been incorporated in waxes to improve anti-skid qualities. Of interest in this connection is a patented polishing wax (21) containing 3 to 5 per cent of an oil-soluble phenol-formaldehyde resin. Others have incorporated various proportions of rubber latex in the wax compositions. (22, 23) With all such additions the question of compatibility, as well as their effects on the characteristics of the wax finish, must be given careful consideration.

Another interesting trend is toward the use of various antiseptic, fungicidal or insecticidal compounds in floor waxes. (24) The advantages of such inclusions are quite obvious. Several years ago, Smith (25) suggested that copper naphthenate could be incorporated into waxes for wooden floors with several beneficial results. Valuable for its preservative and fungicidal properties, he felt that the use of such a compound would also act effectively as a preventive or retardant for a number of insects that attack timber.

This trend is reflected in the recent patent literature. In one case, (26) the patent describes polishing compositions for floors, linoleum and the like, in which are incorporated insecticides and germicides such as hexachloroethane and hexahydrophenol. In one example, 70 parts of paraffin wax, 15 parts of carnauba wax, 10 parts of ozokerite, and 5 parts of beeswax are melted together and mixed with 300 parts by volume of turpentine containing 4 per cent of hexachloroethane.

Other improvements in floor wax polishes are indicated in the pat-

ent literature. In one instance, (27) there is described a method of making a clear, noncloudy, nonmilky aqueous liquid wax polish containing a fairly high proportion of carnauba wax. Another very recent patent (28) discloses procedures for making concentrated, "solid" compositions that may be marketed in this form. Prior to use, these solid compounds are mixed with hot water to form self-polishing wax-in-water emulsions.

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# U.S.I. CHEMICAL NEWS

September ★ A Monthly Series for Chemists and Executives of the Solvents and Chemical Consuming Industries ★ 1945

## New Synthetics May Have Important Therapeutic Uses

A patented, but as yet unused, process of synthesizing quinoline derivatives, according to the inventor, may yield new pharmaceuticals of great value.

Among these new synthetics are 2-(4-methoxy-phenyl) quinoline-6-sulfonic acid, and 2-phenyl quinoline-6-sulfonic acid; compounds in the same family as 2-phenyl quinoline-4-carboxylic acid (sold as a pharmaceutical under the names of Atophan or Cinchophene). Further investigation of possibilities of the new compounds appears to be justified.

Information concerning this patent may be obtained by writing to U. S. Industrial Chemicals, Inc.

## Lecithin Use Broadens As Cost Comes Down

Because yield of lecithin from soy-bean phospholipids is materially increased by the ethanol-extraction method of preparation this food-processing anti-oxidant and emulsifying agent is now available in cheaper commercial forms. As a result, it is being applied to uses from which it was formerly barred by excessive cost.

Among these newer applications are its use in casein paints, plant sprays, creosote emulsions, and softening and wetting agents. In the synthetic rubber industry, it is speeding up vulcanizing and imparting to many synthetic rubber products properties previously found only in natural rubber.

### Cotton Seed Yields Lecithin

A new source of lecithin is cotton seed. Commercially practicable amounts of lecithin are extracted from it by first separating the phospholipids with acetone, then precipitating the lecithin with ethyl-ether in an excess of acetone.

## Montan Wax Alternates Made from Ester Gums

Montan wax, an imported material used in the manufacture of electrical insulation, phonograph records, sizing agents, hardeners, linings, coatings and other products, may be replaced by a new synthetic wax-like composition made entirely from domestic raw materials. The synthetic waxes possess most of the properties of natural montan wax, and, unlike natural montan, do not have to be bleached as they are light in color.

The basic ingredients are a high percentage of ester gum and hydrogenated castor oil. To these are added petroleum wax, petroleum asphalt, or both; or a coal-tar solvent-soluble and gasoline-insoluble resin remaining after solvent refining of wood resin.

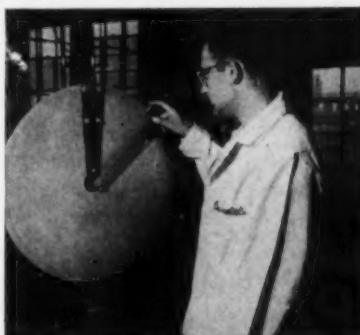
Variation of these additives in kind and proportion imparts to the synthetic wax different properties of hardness, moisture-resistance, viscosity, and melting point, thus adapting these new, wax-like compositions to a wide range of applications.

## Modern Resin Research Hinges On Wide Range of Physical Tests

U.S.I. Reveals Additional Instruments Used for High-Precision Testing at Its Newark Laboratories

The widespread interest in a recent CHEMICAL NEWS article on instruments has prompted U.S.I. to picture here some of the other instruments which are now working overtime in the company's development of new resins to

solve specific wartime problems and in fundamental research aimed toward new and unusual postwar resin products. Although few other fields of chemical research and manufacture depends so heavily on physical testing, these instruments should be of general interest, as well as suggestive of possible adaptations to fields other than resins.



Strength of plastics and plywoods is tested on this accurate impact tester. The weighted arm drops from a pre-set height, breaks the sample at the bottom of its stroke and coasts on up a scale at the left. The height of the swing shows inversely, the amount of energy consumed in breaking the sample, and thus its impact strength.

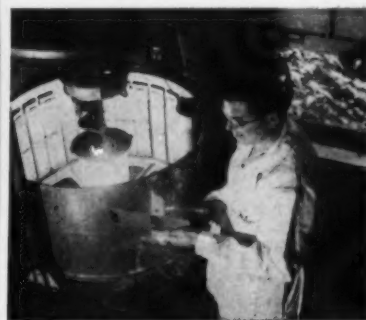
## Purer Vitamins Obtained by New Ethanol Process

More potent vitamins A and D, a New Jersey inventor claims, can be produced by the following process: a concentrate of vitamin A and D, extracted from fish or other marine oil is dissolved in an aliphatic hydrocarbon solvent, and vitamin A is extracted therefrom with an aqueous solution of ethanol. The water content of the ethanol solution is adjusted so that vitamin A will dissolve, but little or no vitamin D will be taken up by the solution.

To separate vitamin D from the solvent-extracted mass, it is esterified, and the esterified vitamin D, now soluble, is removed by extraction with an aqueous solution of ethanol. The water content of the ethanol solutions is adjusted so that the vitamin D esters will be dissolved to the exclusion of any hydrocarbons present.

## 3 Corporate Changes Announced by U.S.I.

Mr. Glenn L. Haskell, President of U. S. Industrial Chemicals, Inc., announces the election, at a recent meeting of the Board of Directors, of Francis T. Dodge, President of Dodge & Olcott, Inc., as a Director, and Bracebridge H. Young, Secretary, as Vice President and Secretary, and the appointment of Thomas H. Casson as Controller.



Synthetic weather is made in this weatherometer which produces the equivalent of months of exposure in a matter of hours. Samples of coatings made from U.S.I. resins are subjected to sizzling sunshine, drenching rains, quick temperature changes—all the conditions they will meet in service.



This Reflectometer electronically measures gloss and color of coatings before, after and during exposure—with great precision. The speed with which measurements are made help U.S.I. chemists get quick answers as to the initial color and gloss and gloss retention of resins.

Uniformly applied coatings are essential to consistent results in studying these coatings. This dip coater, operated by an accurate Telechron motor, dips panels into the coating and withdraws them at a closely controlled rate.



## Improved Wetting Agents Produced With Alcohols

A newly patented process has as its objective increased production of purer sulphated fatty esters, which are used as wetting, penetrating, and emulsifying agents in the textile industry. The end products are said to be clear, oily liquids that produce clear aqueous solutions and have remarkable foaming properties even in highly attenuated dilutions.

The new process prepares these esters in two steps. The first is to produce a low molecular weight alkyl fatty ester by reacting a mono- or polyhydric alcohol, such as ethanol or butanol, with an unsaturated or hydroxy fatty acid in the presence of a catalyst such as alkylated naphthalene sulphonic acid. (In place of the lower alcohols, their esters, such as ethyl acetate, or ethyl formate may be used.)

The final sulphated fatty ester is produced by adding a complex alcohol or ester having ether, ketone or amino groups in its molecule. This mixture is treated with a sulphating agent, and after the reaction is complete, the resulting product is washed with a solution of sodium chloride and neutralized.

## Pantothenic Acid Is Subject of New Patents

One new patent claims to reduce the cost of beta-alanine, intermediate used in the production of pantothenic acid. The new method precipitates beta-alanine from a solution of beta-alanine acid addition salt in ethanol by adding an excess of diethanolamine, ethanolamine and N-morpholinoethanol, or other base having its ionization constant between  $4 \times 10^{-8}$  and  $4 \times 10^{-4}$ .

A second invention covers the production of uniform pantothenic compounds in crystalline form by reacting butyrolactones with beta-alanine. In one example, beta-alanine is dissolved in an aqueous sodium hydroxide solution and d-alpha-acetoxy-beta-beta-dimethyl-gamma-butyrolactone is added. The reaction product is freed of unreacted beta-alanine and acetone is added. The white powder which crystallizes is separated by decanting the mother liquor, and drying the precipitate under high vacuum. The colorless needles thus produced are sodium-L-pantothenate.

## Modern Resin Research

(Continued from preceding page)



The Refractive-index measurements of liquids are indispensable today in the study and identification of resins and plastics. This precision instrument is kept in an air-conditioned room at U.S.I.'s laboratory.



Flexibility measurements are made by bending a coated metal sheet over a tapered mandrel. The smaller the diameter at which cracking occurs, the better the flexibility of the finish.



This electronic titrimeter gives U.S.I. chemists quick, accurate determinations of acid numbers and oxidation reduction potentials without dependence on color interpretation by the operator.

## TECHNICAL DEVELOPMENTS

Further information on these items may be obtained by writing to U.S.I.

**Corrosion-proofing of metal parts**, between production operations, is said to be effected by use of a new water-soluble rust inhibitor that forms an invisible dry film. (No. 973)

USI

**A plastic packaging film**, transparent, tough, elastic and tear-resistant, is described in a new 20 page catalog, with many color illustrations showing applications. Said to be odorless, tasteless and insoluble in water and ordinary solvents, it should find wide application. (No. 974)

USI

**Improved curing of concrete** is said to result from the use of a new membrane-type coating, applied to wet concrete to assure proper hydration. Product is reported not to run at high temperatures, nor to wash off when it rains. (No. 975)

USI

**Faster analysis of gases** having absorption bands in the infra-red section of the spectrum is promised by the manufacturer of a photometer-type gas analyzer. Some gas concentrations as attenuated as one part in 10,000 can be detected. (No. 976)

USI

**Protection of galvanized surfaces** against white corrosion is the purpose of two new liquid finishes. They are applied by dip to parts, complete assemblies or sheet. Treated parts are reported to have shown no corrosion in 236-hr salt-spray tests. (No. 977)

USI

**A stripper for baked japans**, as well as lacquers and enamels, until recently available only for war work, is again on the market for civilian use. (No. 978)

USI

**Four alloys** are described as being resistant to diverse corrosive agents. In this group are alloys having high resistance to hydrochloric acid, sulfuric acid (in all concentrations) and corrosive chlorine compounds. Temperature characteristics and workability are said to be good. (No. 979)

USI

**To render fabrics water-repellent**, a new treatment is offered for dip, brush or spray application. It is said that the new treatment does not affect color or finish of fabric and that it prevents mildew. (No. 980)

USI

**Testing water hardness**, to determine proper concentration of polyphosphates for treatment, is said to be done in minutes instead of hours with a new, conveniently packed test. (No. 981)

USI

**Improved molded plastic production** is promised by the manufacturer of a new, water-soluble material for application to mold surfaces. It is said to prevent sticking and not to discolor the molded plastic part. (No. 982)

USI

**To stop condensation drip**, a manufacturer offers a new coating which can be applied like plaster to pipes and tanks. Claims use of his product can increase refrigeration efficiency up to 25% through evaporative effect. (No. 983)

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\* Ethyl Acetate

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\* Diethyl Oxalate

### PHTHALIC ESTERS

\* Diethyl Pthalate  
\* Diethyl Pthalate

### OTHER ESTERS

\* Diethyl Carbazate  
\* Diethyl Carbazate  
\* Ethyl Formate

### INTERMEDIATES

\* Acetylacetone  
\* Acetylacetone (Hydroxy)  
\* Acetylacetone (Hydroxy)  
\* Acetylacetone (Hydroxy)  
\* Ethyl Acetylacetone  
\* Ethyl Acetylacetone  
\* Ethyl Acetylacetone

### ETHERS

\* Ethyl Ether  
\* Ethyl Ether (Absolute)

### FEED CONCENTRATES

\* Corn Meal  
\* Corn Meal (Liquid)  
\* Vaseline 40

### ACETONE

\* Chemically Pure

### RESINS

\* S.W. Ester Gum  
\* S.W. Ester Gum  
\* S.W. Ester Gum  
\* S.W. Ester Gum  
\* S.W. Ester Gum  
\* S.W. Ester Gum  
\* S.W. Ester Gum

### OTHER PRODUCTS

\* Ethylene Glycol  
\* Ethylene Glycol  
\* N-Methyl-2-Pyrrolidone

# PRODUCTS AND PROCESSES

## Special Soap for Scabies

In six cases of human scabies due to *Sarcoptes scabiei*, 5-6 baths with 20 per cent soap impregnated with tetraethyl thiuram monosulfide ("Tetmosol"), on successive days, cured the patients. Of 110 cases treated with 3 baths with 20 per cent "Tetmosol" soap over a period of a week, 80 per cent were cured, 20 per cent relapsed. This soap may also be used as a prophylactic in an infested community. The incidence of dermatitis is low. R. M. Gordon, T. H. Davey, K. Unsworth, F. F. Hellier, S. C. Parry, and J. R. B. Alexander. *Brit. Med. J.* 1, 803-6.

## Additives for Detergents

To enhance the action of triethanolamine caprylate detergents, high molecular esters of aliphatic polyhydroxy compounds containing at least 1 free hydroxy radical, are used. Some of these compounds are diethylene glycol mono-oleate, diethylene glycol ester of coconut oil mono-fatty acid, glycerol ester of coconut oil mono-fatty acid and mono-caprylin. These compounds are not detergents by themselves, but added even in minute quantities, they greatly enhance the wetting action of triethanolamine caprylates. A. K. Epstein and M. Katzman, to The Emulsol Corp. U. S. Patent No. 2,362,894.

## Naphthenic Soaps for Diapers

Strongly alkaline soaps used in washing baby's diapers may play an important role in causing diaper rash, says H. L. von Goehde, chief chemist of Cuprinol, Inc., Boston. A child's skin is much more sensitive than that of an adult, he points out, and constant contact of the child's hypersensitive skin with material washed with a strongly alkaline soap might well provoke an allergic reaction. He suggests that this particular washing problem may call for a specific type of soap formulated for this particular purpose. Use might be made in such a product,

he indicates, of naphthenic acid soaps in which the pH can more readily be brought into the neutral zone. The added antiseptic value of naphthenic soaps would also, he believes, be of interest.

## Dry Detergent Mixture

A dry mixture is composed of an alkali peroxide, an organic acid anhydride, and a soluble detergent. The preferred peroxide is sodium perborate. Anhydrides such as succinic, phthalic, adipic, benzoic, etc., may be used. The peroxide and anhydride are taken in equimolecular quantities. Suitable detergents are MP-189 or MP-200. J. S. Reichert, S. A. McNeight, and A. A. Elston, to E. I. du Pont de Nemours & Co. U. S. Patent No. 2,362,401.

## Cleaner for Dental Plates

A cleaning preparation for artificial teeth and plates consists of an aqueous solution of sodium perborate and trisodium phosphate to which is added a small amount of a catalytically active alkali permanganate. Kukiral Falerik Kurt Krisp Komm.-Ges. German Patent No. 743,211.

## Fluorescent Cleaner

A product developed recently to meet cleaning problems is "Maintenex," marketed by A. C. Horn Company. A distinctive feature of "Maintenex" is the fact that in going into solution it produces a fluorescent color. This color serves to indicate the correct proportioning of the product in solution. Waste is therefore minimized. The usual ratio is one ounce per gallon of water.

## Foaming Detergent

Incorporation of 0.4-1 per cent of a water-soluble cellulose ether in a detergent consisting of 20-90 parts of a mild acidifying agent such as boric or tartaric acid, or sodium acid phosphate, 5-70 parts of a synthetic detergent such as sulfosuccinate esters or sulfonated higher alcohols, greatly

improves the foaming power. The product may be prepared in cake form and used as a toilet soap by persons subject to dermatitis caused by the alkalinity of ordinary soap. E. A. Vitalis, to Am. Cyanamid Co. U. S. Patent No. 2,373,863.

## Bleaching and Rinsing Aid

A washing, bleaching and rinsing aid is a salt mixture consisting of alkali percarbonates, inorganic salts containing water of crystallization, and inorganic salts which in their powdered state contain water but not as water of crystallization. The total vapor pressure of the mixture is 4-9 mm. of mercury at 20° C., and 9-10 mm. at 30° C. O. Schwartz, to Henkel & Cie G.m.b.H. German Patent No. 744,994.

## Laundry Sour

A composition suitable for use as a laundry sour comprises 7.5 parts of ammonium chloride and 0.5-2 parts of magnesium carbonate, to which 2-10 parts of starch or equivalent material may be added to prevent caking. Addition of 2-10 parts of oxalic acid, sodium hydrofluoride, ammonium hydrofluoride, sodium fluosilicate, ammonium fluosilicate, etc., to the product enables it to impart a slight degree of permanent acidity to textiles. The sour gives baths of about pH 6.5-6.9, a particularly desirable range for tinting and finishing textiles. A. V. Klancnik and F. J. Klancnik. U. S. Patent No. 2,375,664.

## Rosin Derivatives

Alkali, ammonium, or amine salts of sulfonated pentaerythritol esters of hydrogenated rosins are used as detergents. The esters have at least one free hydroxyl group per molecule. W. F. Carson, Jr., to Hercules Powder Co. U. S. Patent No. 2,362,882.

## Tall Oil Product

A sulfonated polyhydric alcohol containing at least one halogen and one hydroxy is caused to react with a polyhalogenated tall oil. E. E. Dreger and J. Ross, to Colgate-Palmolive-Peet Co. Canadian Patent No. 428,823.



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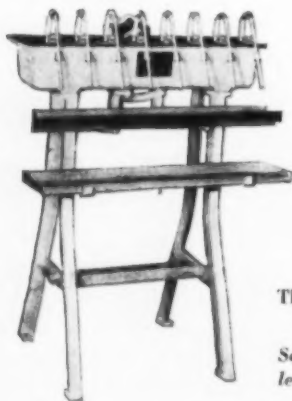
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Complete copies of any patents or trade-mark registration reported below may be obtained by sending 25c for each copy desired to Lancaster, Allwine & Rommel. Any inquiries relating to Patent or Trade-Mark Law will also be freely answered by these attorneys.

**No. 2,379,223, Insecticides,** Theodore W. Evans, Oakland, and Paul H. Williams, Berkeley, Calif., assignors to Shell Development Co., San Francisco. An insecticidal composition comprising pyrethrum and a diallyl amide of an aliphatic carboxylic acid of 9 to 18 carbon atoms.

**No. 2,379,535, Wetting and Emulsifying Agents,** patented June 3, 1945 by Kathryn L. Lynch and Herbert J. West, Old Greenwich, Conn., assignors to American Cyanamid Co., New York. Dioctyl N-(beta-sodium sulfo ethyl) aspartate.

**No. 2,379,723, Parasiticial Preparations,** patented July 3, 1945 by Elbert C. Ladd, Passaic, N. J., assignor to United States Rubber Co., New York, N. Y. An insect repellent composition comprising a carrier and N-nitroso-phthalimidine as an active ingredient.

**No. 2,379,851, Cleaning Composition,** patented July 3, 1945, by John D. Morgan, South Orange, and Russell E. Lowe, East Orange, N. J., assignors to Cities Service Oil Co., New York. A cleaning composition comprising about 39 per cent by volume of egg albumen, about 39 per cent by volume of distilled water, from about 6.8 per cent to about 8.8 per cent by volume of a potassium coconut oil soap solution having a specific gravity of about 1.028, from about 1 per cent to about 2 per cent by volume of glycerin, about 1 per cent by volume of a 20 per cent solution of sodium stearate, and about 11.7 per cent by volume of a 10 per cent solution of sodium hexametaphosphate.

**No. 2,380,011, Germicidal Preparations,** patented July 10, 1945, by Zelma Baker and Benjamin F. Miller, Chicago. Composition of matter for the oral cavity comprising a secondary alkyl sulphate containing from 8 to 21 carbon atoms in the molecular structure as an active germicidal agent and a carrier base therefor selected from the class consisting of tooth powder, tooth paste and chewing gum.

**No. 2,380,259, Cleansing Composition,** patented July 10, 1945 by Fred E. Pierce, Los Angeles. A composition for use in making aqueous solutions for the treatment of vegetables and fruit for the removal of spray residues therefrom and for the treatment of trees for the control of scale thereon comprising: 17 per cent to 38 per cent by weight of tri-sodium phosphate, 25 per cent to 75 per cent by weight of a double salt of trisodium phosphate and sodium nitrate and 12 per cent to 38 per cent by weight of tetra-sodium pyrophosphate.

**No. 2,380,650, Continuous Saponification Process,** patented July 31, 1945, by Joseph John Jacobs, New York, assignor to Autoxygen, Inc., New York. The continuous process of saponification which comprises the steps of mixing a saponifiable material, a saponifying alkali, and a volatile diluent, heating said mixture to effect saponification, providing sufficient sensible heat to vaporize the diluent and the hydroxy component of the products of saponification at a predetermined pressure, discharging the saponified mass in a finely divided condition in a zone of lower pressure, and flashing off the volatile constituents of the saponmass, thus precipitating the non-volatile portions.

**No. 2,380,830, Skin Cleaning Composition,** patented July 31, 1945, by Stuart O. Fiedler, Cincinnati, assignor to The Drackett Co., Cincinnati. A composition of matter for cleaning the skin which comprises from about 50 per cent to about 70 per cent by weight of dried residual meal obtained as a by-product from the commercial extraction of oil, protein, and carbohydrates from soybeans, said residual meal containing approximately 15 per cent to 25 per cent by weight fibrous material and approximately 15 per cent to 25 per cent by weight unextracted protein, said meal being of a particle size not substantially greater than 20 mesh and for the most part not substantially finer than 60

mesh; and from about 30 per cent to about 50 per cent by weight of a mildly alkaline salt of an alkali metal in solid undissolved form.

**Continuous Soap Manufacture**

A fatty material and a saponifying agent are mixed automatically and the mixture is conveyed through a reaction zone, a holding chamber and a reduced-pressure chamber. A temperature of 290-1000° F. is maintained within the reaction zone by moving over it a heat-carrying medium. This medium contains approximately 40 parts of sodium nitrite, 7 of sodium nitrate and 53 of potassium nitrate. R. W. Ward, to National Oil Products Co. U. S. Patent No. 2,362,734.

**Organic Base**

Cyclohexylamine has recently been put into commercial production by the Monsanto Chemical Company of St. Louis, and is believed to be applicable to many industrial uses heretofore not considered. Cyclohexylamine is a strong base, reacting with carbon dioxide in the air in the same way that caustic soda solution does. It reacts with fatty acids to form soaps. It is also an emulsifying agent. The water-white liquid is completely miscible with water and with all common organic solvents. Dicyclohexylamine is similar in properties and is an even stronger base than the mono compound.

**Tall Oil Fatty Acids**

The composition of six samples of American tall oil was quite similar in fatty acids. The average values were linoleic acid 48 per cent, oleic acid 45, and saturated acids 7 per cent. There is about 11 per cent of conjugated linoleic acid present, probably formed by the action of alkali and heat during the cooking of the pulp from which the tall oil was formed.

Detailed fractional distillation of a sample of the methyl esters of the fatty acids showed that the saturated acids are mostly palmitic, that there may be about 1 per cent of palmitoleic, and that the conjugated linoleic acid present can be separated and concentrated by fractional distillation. R. H. Anderson and D. H. Wheeler. *Oil & Soap* 22, 137-41 (1945).



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### Cleaning Pillows

Feathers in pillows are not cleaned properly unless the method restores feather curl to give "new pillow" comfort, removes all dirt and dust, and leaves the feathers sterile. For sterilization the feathers must be treated with live steam followed by processing at about 300° F. In order to sterilize the feathers, they must be removed from the ticks. If the feathers are washed or dry-cleaned without removal, the pillow tick acts as a filter bag to retain dirt. Also if the feathers are tumbled they are not properly fluffed if left in the tick. The pillow tick should be turned inside out before washing. *Laundry & Dry Cleaning J. of Canada*, 30-1, June 1945.

### Fatty Acid Analysis

A method is described for the analysis of fatty acids in fats and oils. Mixtures of known composition of purified methyl esters of lauric, myristic, palmitic, stearic, oleic, linoleic and linolenic acids were prepared. Fractional distillation under reduced pres-

sure followed by spectrophotometric determination of methyl linoleate and methyl linolenate in each of the fractions, and determination of iodine values and saponification equivalents, allowed calculation of the compositions which agreed well with the compositions of the original mixtures. A. R. Baldwin and H. E. Longenecker. *Oil & Soap* 22, 151-3 (1945).

### Antioxidant

Organic substances which tend to deteriorate by absorption of oxygen from the air may be preserved by incorporation of a reaction product of a diene with an aromatic amine. L. H. Howland and P. T. Paul. Canadian Patent No. 427,656.

### Chemistry of Cleaning

The basic factors involved in cleaning a surface include wetting, emulsification, saponification, colloidal activity, solvent power, pH, buffer action, total alkalinity and acidity, and water conditioning. R. Sanders. *Iron Age* 155, No. 15, 62-7 (1945).

### Contact Angles

The junction of an air-liquid interface with a solid surface is fundamentally a one-dimensional system. This line of junction can occupy various possible parallel positions on the plane of the solid surface, and different positions allow different works of adhesion. The equilibrium contact angle is related directly to the line of the least possible mean work of adhesion that the three-phase system can assume, while the receding contact angle is related to the greatest work of adhesion and the advancing contact angle to the greatest amount of work necessary to wet the solid surface. D. C. Pease. *J. Phys. Chem.* 49, 107-10 (1945).

### Amide Detergent

A detergent and sudsing agent is made as a sulfated amide. A halide of a fatty acid is condensed with a low-molecular monoalkylol amine. This is then sulfated and neutralized. H. Bertsch. Canadian Patent No. 427,726.

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## AMERICAN OIL SOURCES

(From Page 37)

oils from the American tropics have already won premium market gradings, and further quality improvements are in prospect when it is possible to buy the equipment for more efficient operation.

During the recent war years it has not been possible to get modern distillation equipment, and such factories as have been put up had to be improvised from any available odds and ends. One of this hemisphere's biggest grass oil distilleries, put into operation near La Lima by the Tela Railroad Company, a subsidiary of United Fruit, is strictly a collection of salvaged old boilers, discarded iron pipe, home constructed wooden stills. But at any rate it works and has been able to turn out a product which compares favorably with the product of the Javan stills taken from us by the Japs.

The U. S. Agricultural Experiment Station in Puerto Rico is reported to be experimenting in the production of citronella grass for the production of menthol. The station is also growing lemon grass, jasmin, gardenia, cassia and mimosa, and is reported to be studying the possibility of obtaining an essential oil from the blossoms of the coffee tree.

The Jewish refugee colony at Sosua on the north coast of the Dominican Republic also plans to specialize in essential oil production and has made extensive plantings of citronella, lemon grass and ylang ylang.

Essential oil production has even been attempted in the United States, with a certain measure of success. The U. S. Sugar Corporation launched a program of lemon grass planting in the area of Clewiston, Fla., in July, 1942, and there are now an estimated 1,800 acres under cultivation. Although the Florida climate is

not consistently warm enough to permit the profitable growth of the propagated strains of citronella, the district can and does produce lemon grass.

A number of other essential oils such as pine, eucalyptus, coriander, marjoram, etc., can also unquestionably be produced in the Middle Americas if prices and tariff conditions permit. When far eastern essential oils once more become available in normal volume, they may very well face some strong competition from this new American industry.

## MARKETING RESEARCH

(From Page 43)

Oil, Paint and Drug Reporter (weekly) also Green Book (Directory of products and sources of supply)

Chemical Equipment Preview: new chemicals and Equipment

Industrial Marketing, Market Data Book

**CHEMICALS**

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The Journal of Marketing  
Advertising and Selling  
American Business  
Sales Management  
Editor and Publisher, Market Guide  
Industrial and Engineering Chemistry  
Printers' Ink (weekly); miscellaneous other bulletins  
Manufacturers' Record  
Iron Age, Metals and Alloys, Steel  
Business Week, American Business, Fortune, Barron's Investors' Guide  
A host of other trade publications should be consulted for specialized fields. The N. W. Ayer & Son Directory lists all publications and their addresses. Among the reference books, bibliographies, etc., we may cite:

Chemical Abstracts  
Patent Gazette  
Cumulative Book Index  
Industrial Arts Index  
Readers' Guide to Periodical Literature  
Monthly Catalog of United States Public Documents  
Public Affairs Information Service  
Telephone directories, regular and classified, of leading cities  
Daily Newspapers: Especially, Journal of Commerce, Chicago Journal of Commerce, Wall Street Journal, The New York Times, New York Herald Tribune  
City Directories

#### Other Miscellaneous Publications:

Rand McNally Commercial Atlas and Marketing Guide  
Survey of Buying Power  
Chemical Facts and Figures, The Manufacturing Chemists' Association (1940)  
Materials Survey, McGraw-Hill Book Co. (1944)  
Prescription Ingredient Survey (1941)  
American Year Book, Chapter on Chemistry and Physics  
Commercial Fertilizer Year Book  
Commodity Year Book  
Uses and Applications of Chemicals and Related Materials, T. C. Gregory, 2 volumes  
Chemical Dictionary, T. C. Gregory  
Modern Drug Encyclopedia and Therapeutic Guide  
Economics of Chemical Industries, E. H. Hempel  
Chemicals of Commerce, F. D. and C. T. Snell  
Chemical Engineering Catalog  
Chemurgic Digest  
Plastics Catalog  
Soap Blue Book  
American Druggist  
American Dyestuff Reporter  
American Fertilizer  
American Hairdresser  
American Inkmaker  
American Journal of Pharmacy  
American Paint Journal  
Dun's Review  
The Fertilizer Review  
India Rubber World  
Canadian Chemical and Process Industries  
Journal of Parasitology  
Modern Plastics  
Oil and Soap  
Pacific Plastics  
Paint Industry Magazine  
Plastics  
Plastics & Resins Industry  
Rayon Textile Monthly

Rubber Age  
Textile World  
Journal of the American Pharmaceutical Association  
Journal of Economic Entomology

Associations and Societies: For a detailed list see Trade & Professional Associations of the United States, U. S. Department of Commerce (1942)

American Association of Manufacturers  
American Drug Manufacturers Association  
American Pharmaceutical Association  
American Pharmaceutical Manufacturers Association  
Associated Drug and Chemical Industries of Mo.  
Chemical Foundation, The  
Chicago Perfumery, Soap, & Extract Association  
Drug, Chemical & Allied Trades Section of N. Y. Board of Trade.  
Essential Oil Association of the United States  
Flavoring Extract Manufacturers Association of the United States  
National Farm Chemurgic Council  
American Association of Textile Chemists and Colorists  
American Chemical Society  
American Economic Association  
American Institute of Chemical Engineers  
American Management Association  
American Marketing Association  
American Petroleum Institute  
American Pharmaceutical Manufacturers' Association  
American Statistical Association  
Association of American Soap and Glycerine Producers  
National Pest Control Association  
Brookings, Institute, The  
Committee for Economic Development  
Druggists' Research Bureau  
League of Nations  
Manufacturing Chemists' Association  
National Association of Insecticide and Disinfectant Manufacturers  
National Bureau of Economic Research  
National Fertilizer Association  
National Industrial Conference Board  
National Paint, Varnish and Lacquer Association  
Society of the Plastics Industry  
Society for the Advancement of Management  
Synthetic Organic Chemical Manufacturers Association of the United States  
Toilet Goods Association  
Twentieth Century Fund

Several additional sources include: engineering, technical, and trade societies, United States Chamber of Commerce and local chambers, State Development Commissions; university business research bureaus at University of Minnesota, Michigan, Pennsylvania, Chicago, Harvard, Yale, Stanford, Ohio State and others; business services on economic problems; bulletins issued by consulting firms and technical advisers, bulletins of private banks; and annual reports of chemical and other corporations.

Miscellaneous References on Marketing

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Profits from Practical Marketing Research, F. K. Leisch, No. 24, American Management Association (1937)  
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How Much "Deferred Demand" Will Turn Out To Be a Pipedream, Fowler Manning, Sales Management (January 15, 1944)  
Preparation and Use of Salesmen's Manuals, Metropolitan Life Insurance Co. (1939)  
Market Patterns in Eight Large Cities, Division of Commercial Research, Curtis Publishing Co. (1938)

# SANITARY PRODUCTS

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# INSIDE NEWS

SEPTEMBER

PREPARED BY NATIONAL CAN CORPORATION, NEW YORK, N. Y.

1945

## Industry Uses Enzymes to Make Syrup Sweeter, Fruit Juices Clearer

Remember the muddy-looking cider which used to appear around Halloween time? It's now largely replaced by a golden-colored, appetizing apple juice, free from discolorings and sediment. Remember cloudy, particle-filled Concord grape juice and wines? They too are also clearer today. Credit this to industry's use of pectinol enzymes by which permanent clarity is also made possible for citrus, peach and blackberry juices.

You probably recall from school days that enzymes are mysterious and complex chemicals. Their name is derived from the Greek "en" meaning "in" and "zyme" meaning "yeast." As this implies, enzymes are catalytic in character, speeding up chemical changes without themselves being consumed by the reaction. Being purified natural products themselves, they enhance the delicate flavoring of the original fruit juice and leave the vitamin and mineral content unimpaired.

Another enzyme has been brought to wide commercial use because of the prevailing sugar shortage. This particular enzyme helps convert the familiar corn syrup to one which possesses more than twice the sweetness of the original syrup.

The soft and pliant leather which we now have in belts and shoes is mainly the result of an enzyme action. For many years the tanning industry was forced to rely on a vile-smelling liquor involving the fermentation of dung and causing waste and spoilage of large stocks of raw leather. But, as a result of the development of the enzyme bate, oropon, tanners now have control over this "bating" process, eliminating bad working conditions and greatly reducing the spoilage of hides.

Normally, enzymes work at the temperature of living organisms, and, when used commercially, their action can be stopped at will by raising the temperature when the desired work is done. At the laboratories of a

leading American producer of industrial enzymes, the fungi are grown to form "seed" which are "sown" on an appropriate medium under carefully controlled temperatures, and finally "harvested." The culture is then dried, ground and the enzyme extracted for commercial use. Enzymes are soluble in water and insoluble in alcohol.

However, comparatively little is known about the actual chemical structure of enzymes; and even the way they work is not known in detail. Chemists find that the enzyme is produced by certain molds in nature, and they know that by handling the enzyme in certain ways they will get predetermined results.

Certain laboratory-cultured fungi or non-flowering plants similar to mushrooms have been found to yield enzymes. These enzymes are "harvested" from the fungi and are today known to turn wood into sugar, sugar into fat, to help make buttermilk, cheese, beer, sweeter sugar syrups, clearer full-flavored wines and ciders, stronger textiles, and better leather goods and paper products.

Today, the pectinol enzymes are performing wartime jobs. With transportation facilities greatly overtaxed, fruit juices are being evaporated and concentrated to save shipping space. Through the use of pectinols, more complete concentration is achieved at faster rates of speed through the elimination of the pectic substances occurring in fruit tissues as part of the sap and cell wall.

As wartime chemical research helped discover enzymes for giving clarity to fruit juices and develop other desirable industrial processes, wartime packaging research helped develop tin containers to meet the most rigid battlefield requirements. These parallel developments are sure to provide a better product in a better container when can production and distribution restrictions are lifted.

1069

### More Milk Tests for Lactic Acid

Lactic acid forms only a very small proportion of the acids produced when milk is subjected to relatively high temperatures, as in canning. For that reason, high lactic acid content, that is, high for the small amount of total acid present, indicates an undesirable condition in the raw milk from which the canned product is derived, and determination of lactic acid is advocated as a quality control test.

1070

### Quick Tomato Paste

Tomato paste processed at 210 to 220 deg. F., while moving at high velocity in continuous streams through tubes in a heating chamber, cooled immediately thereafter to 190 to 200 deg. F., and filled into sterilized cans, maintains its color and body, according to a recent patent.

Sealed cans must be inverted immediately to insure sterility in the headspace. It is claimed that paste of 30 to 65 percent solids can be produced readily in the apparatus described.

1071

### Keeping Water Clean

Outwitting algae where large quantities of water are used for temperature control, pasteurization or washing, is complicated by the fact that these plant organisms have practiced for millions of years the trick of adaption to environments that changed in physical and chemical characteristics. Temperature extremes do not faze them. Abrasion resistance of a high order is built up in their slimy coats. Chemicals that at first seem destructive are soon tolerated. But the little plants break down under the stress of cyclic adaption.

In nature, changes in environment tend to follow a slow drift, developing more and more of the same thing. When the drift is interrupted, adaption is made more difficult. So if two different types of chemicals, each destructive to the algae on first application, are used alternatively, changing each time as a tolerance seems to be established, algae can be kept out of industrial water.

One pair that can be used has one member containing sulphates and silicofluorides, while the other utilizes pentachlorophenol and cresylic acid.

1072

### Controls Stem End Decay in Citrus Fruit

USDA and Texas Agriculturists found an organic compound of mercury to be beneficial to control stem end decay of lemons and other citrus fruit. This compound is a poison, yet the rinds of lemons are used in grating for lemon pies, and pieces of lemons are placed in various beverages and specialty dishes. Now, a report is available to show that the mercury can be easily washed off. This process leaves no mercury in the pulp or in the peels of the lemons. A method was prepared for testing the mercury solution used to dip control this citrus disease.

1073

### Eliminates Aquatic Weeds

Orthodichlorobenzene has been found to be very effective in the elimination of aquatic weeds. Single treatments have eliminated weed growth in irrigation canals for periods up to six months. Regrowth has been delayed or retarded. Varying characteristics of the water, such as salinity and hardness, are believed responsible for the occasional variation in effectiveness of the treatment. The material is applied in the form of an emulsion. It is said not to harm crops or canal bank vegetation. Livestock are reported not to drink water containing sufficient quantities of the chemical to be harmful.

1074



# NATIONAL CAN



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## Peanut Crop Promises Greater Industrial Use

A more further utilization of the peanut crop is announced. After the oil is extracted the high protein meal, used for livestock feed, has been found to have even greater industrial use as adhesives, coatings and sizings. After the protein is extracted from the meal the waste liquor, formerly a nuisance in streams and sewers, has been found to contain 1% sugar. This treated with a food yeast yields a protein feed valuable for its vitamin content. This same yeast, *Torulopsis utilis*, has been used successfully in treating the waste of sweet potato starch mills. 1075

## Preserving Nuts

Preserving quality in minor ingredients is a constant food plant problem. It is particularly so today when new sources of materials must be utilized.

Nut meats for use where sugar is not objectionable, can be sterilized by dipping in boiling 50 to 75 percent sucrose solution, with 1 percent salt added, followed by drying in hot air. Treated nuts should be stored in sterile glassine bags at room temperature and 42 to 50 percent relative humidity until used. Refrigerator storage destroys crispness. 1076

## Fertilizers Improve Tomato Crop Quality

Using fertilizers increases crop yield. But growers have observed that it may also improve crop quality. Now research horticulturists prove these observations have a basis on canner tomatoes. Fertilizer treatments not only increased yields but also made each ton of tomatoes more valuable because of larger percentage in the U. S. No. 1 grade. 1077

## Table Oil From Shade Tree

An ornamental tree, now coming into use for shade on cacao plantations in Brazil, has been found to yield from the seed 22% oil with a clear, pleasant odor making it desirable for table use. The tree, *Clitoria racemosa*, is being introduced by the Rio de Janeiro Botanical Garden. 1078

## How Smooth Is Smooth?

Plastics and light are combined in a new method that the Bureau of Standards has developed to tell how smooth are smooth metal surfaces. Smoothness of surface finish is particularly important to food plants where apparatus must be kept clean and sanitary. 1079

## Plasticizer for Synthetic Rubbers

A patented plasticizer specially developed for synthetic rubbers is used along with the customary fillers and other ingredients. 1080

## Technical Topics

### SUBMERGING OIL FOR MOSQUITOS

—Hydrocarbon oil of a highly cyclic nature, having a specific gravity at least as heavy as water, is claimed to be more efficacious than a floating oil for the extermination of mosquitos and other insects during their water-dwelling phase. The reason is that the submerging oil does not have the fault of the floating oil which is difficult to maintain as a continuous film, as it must be to be effective. 1081

**SPEEDY STERILIZATION**—A patent has recently been issued for rapidly rotating a sealed can of liquid about its axis to increase heat transfer to the contents. This makes it possible to heat and to cool the contents rapidly enough to obtain the benefits of "flash" heating, while protecting the product from exposure to the air. In evaporated milk, the speed-up in sterilization prevents cooked flavor and caramelization. 1082

**MOQHS FOR PERFUME**—The Gypsy moth, serious insect pest of the orchard, may have a valuable economic use to make it worth breeding instead of killing. English scientists have discovered that a benzene extract of the abdominal tips of the female indicate a valuable use in perfumery, particularly as a perfume fixative. 1083

**PREVENTS OIL FOAMING**—Polymerized dihydrocarbonsilicones are declared to be effective, even when present to the extent of but 0.1 percent, in preventing and breaking foaming in aviation lubricating oils. Similar claims are made for hydrocarbon silicates in a recently issued patent. 1084

**SOY BEANS FOR BABIES**—According to recent research, strained green soy beans have been shown to have good nutritive value and other characteristics that favor their inclusion in baby foods. Previous use of soy beans for babies has taken the form of the curd or milk from the dried beans. 1085

**NEW INDUSTRIAL STABLE CHEMICAL**—A new industrial chemical claims a stability and melting point sufficiently high that products made from it may be used at more elevated temperatures than those from phthalic anhydride. 1086

**SUNTAN CREAM**—A newly discovered suntan cream is reported to function excellently in absorbing ultra-violet light, and in filtering out sun rays dangerous to the skin while passing the desired tanning rays. 1087

**SUPERIOR LIQUID DRESSING**—A new formula for liquid belt dressing has been developed, and it is said to result in a distinctly new, superior liquid dressing. 1088

**TREATMENT FOR LOCKJAW**—A new method of preparing a tetanus toxin aimed at the prophylaxis and therapy of lockjaw is reported. 1089

**ELIMINATES HEAD LICE**—Lauryl thiocyanate, in oil solution, is now being offered for the extermination of head lice. 1090

**BE SURE OF YOUR VITAMINS**—Beta carotene is advised for use as a standard in vitamin A determinations. Those made with U. S. P. reference cod liver oil No. 2 may be from 30 to 44 percent above the actual values, due to instability of the vitamin in the oil and to variations in potency. This much overoptimism in estimation of added vitamin A could reduce a seeming safety factor to a deficit. 1091

**WATERPROOF COATING RESISTS FIRE**—A new resilient waterproof coating is on the market which is said to be unusually resistant to extremes of temperature, acid fumes and fire. It is designed for use on roofs, walls, and other exposed surfaces. 1092

**TURN IN EMPTY CANS**—Cans are moisture-proof, rust-proof, germ-proof containers which are indispensable in protecting supplies wherever our men are fighting. Empty tin cans are important war weapons. Don't throw them away. *The sooner every available empty tin can is turned in, the quicker final victory will come!*

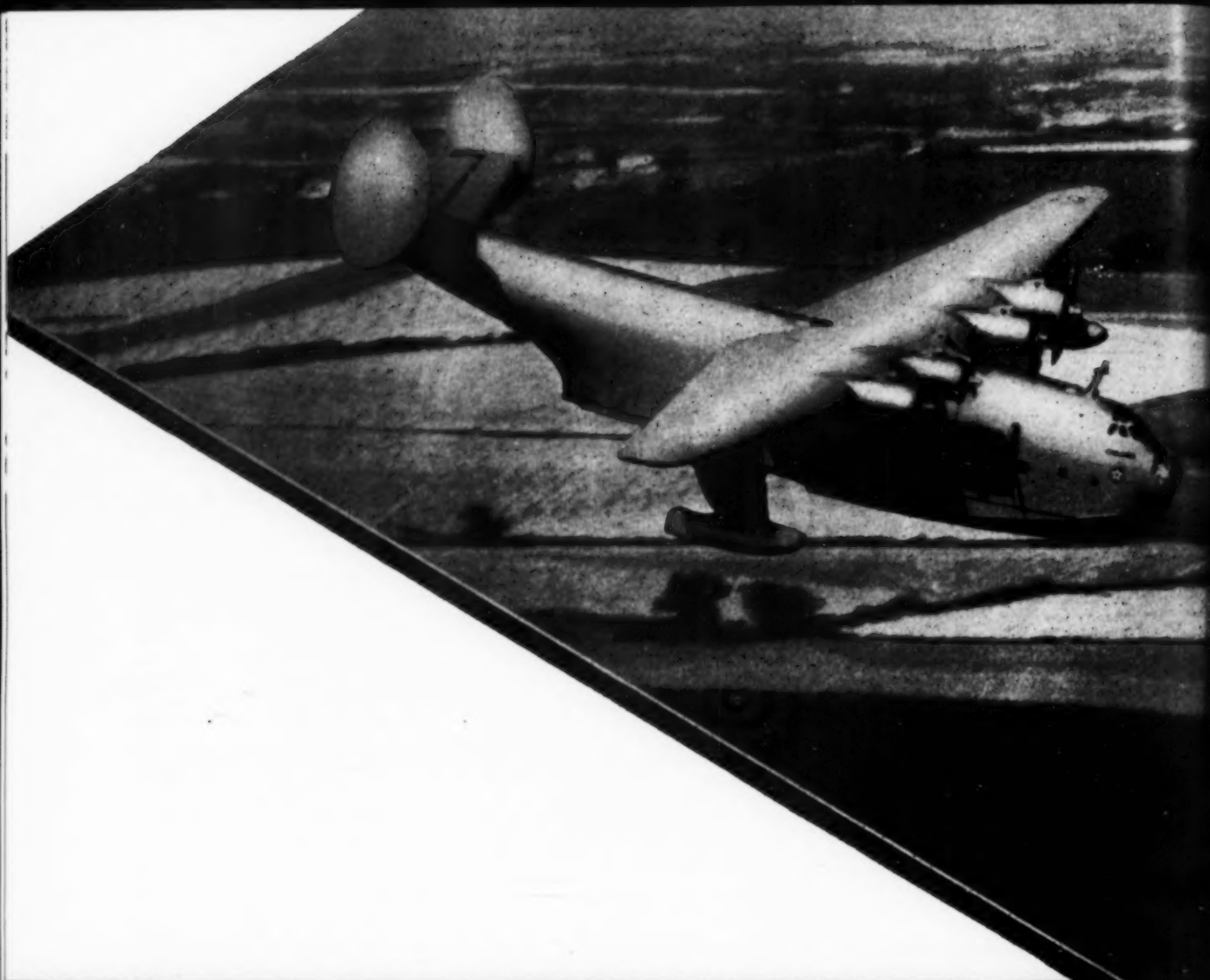
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# DOUBLE

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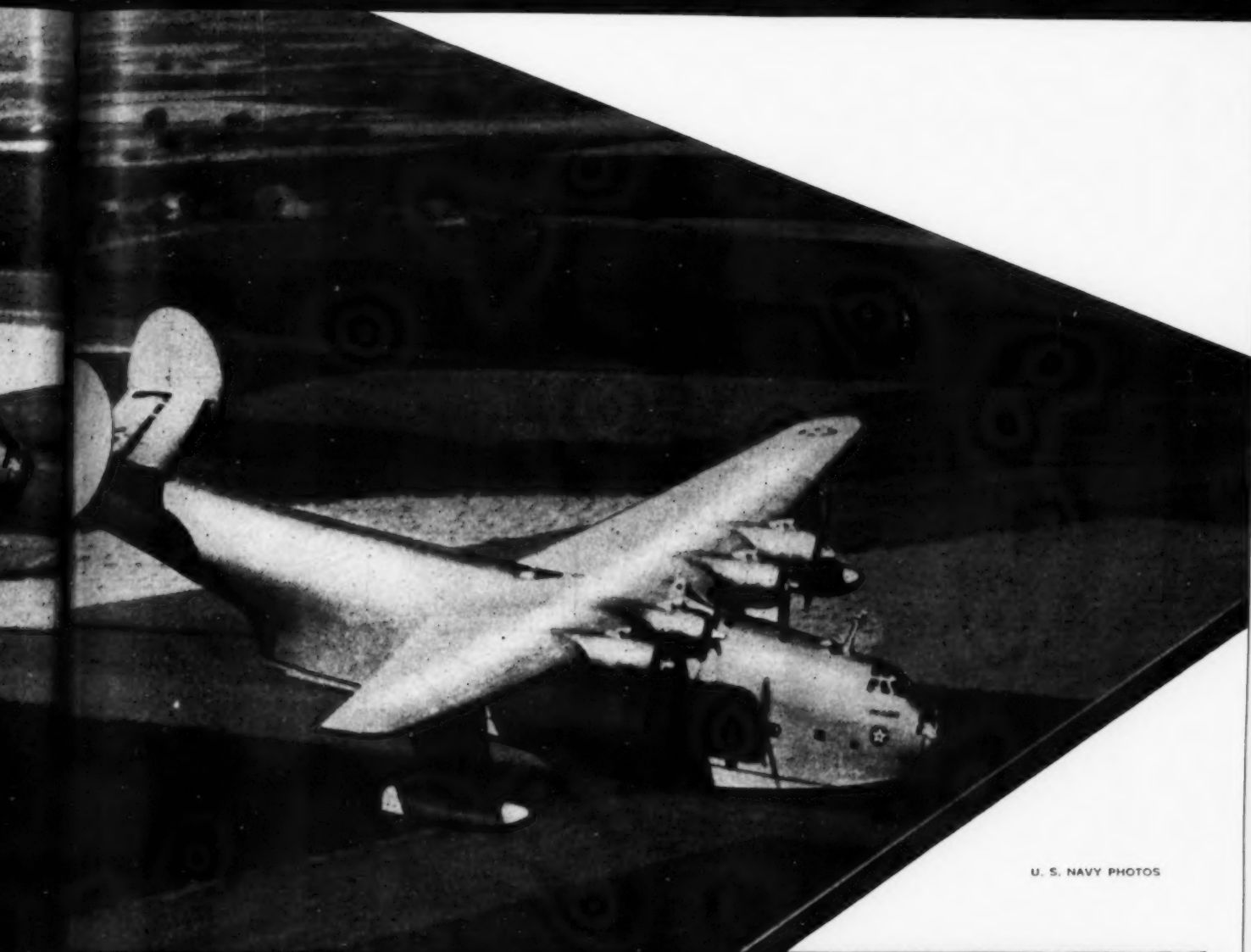
A companion program of research is now being carried on with DDT (dichloro-diphenyl-trichloroethane). In cooperation with one of America's largest chemical manufacturers, MGK is developing and testing many DDT insecticide formulations.

Identified and marketed under the Trade Mark "Multicide"\* they will include the following:

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*Solid Concentrates for Dusts and Sprays:* Multicide No. 80, Multicide No. 75WA, Multicide No. 50, Multicide No. 50WA, Dry Multicide.

# McLAUGHLIN GORMLEY K



U. S. NAVY PHOTOS

# MISSION



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## *made better with* **SONNEBORN** Petroleum Products

Leading manufacturers of many chemical specialties have long standardized on SONNEBORN white oils, petrolatums and other petroleum products . . . convincing evidence of the unsurpassed Quality, Purity and Stability of these highly refined ingredients.

End-uses of some of the successful chemical specialties which are made better with SONNEBORN petroleum products are shown. There are many others.

The research facilities of the SONNEBORN laboratories, backed by 64 years of refining experience, are available for aid in current production problems and in the development of new products for postwar markets.

Write for  
**TECHNICAL DATA FILES**  
on uses that interest you.



HOUSEHOLD SPRAYS



CATTLE SPRAYS



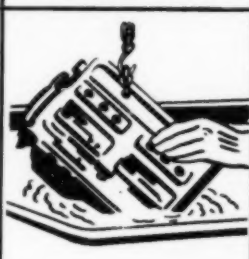
AGRICULTURAL SPRAYS



CORN EARWORM OILS



INSECT REPELLENT  
CREAMS AND LOTIONS



DEGREASING EMULSIONS



CLEANING EMULSIONS



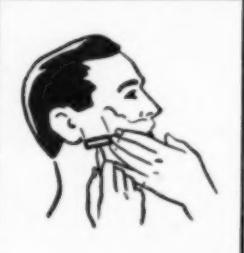
EMULSION POLISHES



PROTECTIVE CREAMS  
FOR INDUSTRY



ANIMAL REMEDIES



BRUSHLESS SHAVE CREAMS



SOAPS

### SONNEBORN PRODUCTS FOR CHEMICAL SPECIALTIES

#### DEO-BASE

For Household, Cattle and Agricultural Sprays, Degreasing, Cleaning and Polishing Emulsions.

#### PETROMIX No. 9

For Degreasing, Cleaning and Polishing Emulsions.

#### TRI-OL

For Brushless Shave Creams, Soapless Oil Shampoos, and Skin Cleansers.

#### SULPHONATED OILS

For Animal Remedies and Protective Creams for Industry.

#### PETROBLEND

For Agricultural Sprays.

#### PETROLATUMS U. S. P.

For Insect Repellent Creams, Animal Remedies, Protective Creams for Industry.

#### WHITE MINERAL OILS

For Insect Repellent Lotions and Animal Remedies.

CARNATION for Protective Creams for Industry, Soaps and Brushless Shave Creams.

KLEAROL for Cattle Sprays and Emulsion Polishes.

PURITAN for Corn Earworm Oils.

SPRAY STOCK "A" for Agricultural Sprays.

### WHITE OIL AND PETROLATUM DIVISION

Dept. SSC

## L. SONNEBORN SONS, INC.

88 Lexington Avenue, New York 16, N. Y.

Refineries: Petrolia and Franklin, Pa.

Branch Offices: Chicago, Baltimore, Philadelphia and Los Angeles

Stocks Carried in Principal Cities

In the Southwest: Sonneborn Bros., Dallas 1, Texas

Say you saw it in SOAP!

September, 1945



*Available for  
Immediate Shipment*

!!

DDT RESIDUAL SPRAYS

PYRETHRUM and DDT SPRAYS

CONCENTRATES

SYNTHETIC and PYRETHRUM

Containing

**DDT**

LABELS,  
SAMPLES  
FREE

PLAY SAFE

COMPLETE  
LITERATURE  
AVAILABLE

Order Your DDT

From

**BAIRD & McGUIRE, INC.**

ST. LOUIS, MO.

HOLBROOK, MASS.

# *Rohm & Haas announces*

FOR HIGH KILL WITH FAST ACTION

**DDT +**

LETHANE 384  
in livestock sprays

or

LETHANE 384 SPECIAL  
in household sprays

FOR HIGH KILL WITH FAST ACTION

*PLUS GREATER SAFETY*

**RHOTHANE  
D3 +**

LETHANE 384  
in livestock sprays

or

LETHANE 384 SPECIAL  
in household sprays

**R O H M & H A A S**

Manufacturers of Chemicals Including Synthetic Insecticides... Fungicides...

# RHOTHANE D3

(Dichloro-Diphenyl-Dichloroethane)

## New Insecticidal Agent Offers Characteristic Advantages of DDT Plus Greater Safety

FOR more than twenty years the Rohm & Haas research staff has pioneered in the field of synthetic insecticides. It is natural, therefore, in periods of accelerated development like the present, that the industry should look to this group of chemists and entomologists for further worthwhile accomplishments.

Now we announce RHOTHANE D3... a new compound comparable to DDT in insecticidal activity... yet *substantially less toxic to humans and warm-blooded animals*. With the addition of DDT and RHOTHANE D3 to our line, we now can supply the toxic agent for the various spray requirements of the industry.

### Lethanes for Fast Knock-Down

DDT has become a by-word for *high kill*, and RHOTHANE D3 compares favorably with it in this characteristic. But household and livestock sprays must have *fast knock-down*, too, and the Lethanes have behind them more than fifteen years of leadership as the fastest acting toxic agents per unit of killing power.

For high kill with fast action in household and livestock sprays—use DDT in combination with LETHANE 384 Special and LETHANE 384. For high kill with fast action... *plus greater safety*... use RHOTHANE D3 combined with LETHANE 384 Special or LETHANE 384.

AVAILABLE  
NOW FOR  
EXPERIMENTAL  
WORK

BOTH DDT and RHOTHANE D3 and their special formulations with LETHANE 384 and LETHANE 384 Special are available now for experimental work. Write for testing samples and detailed information.

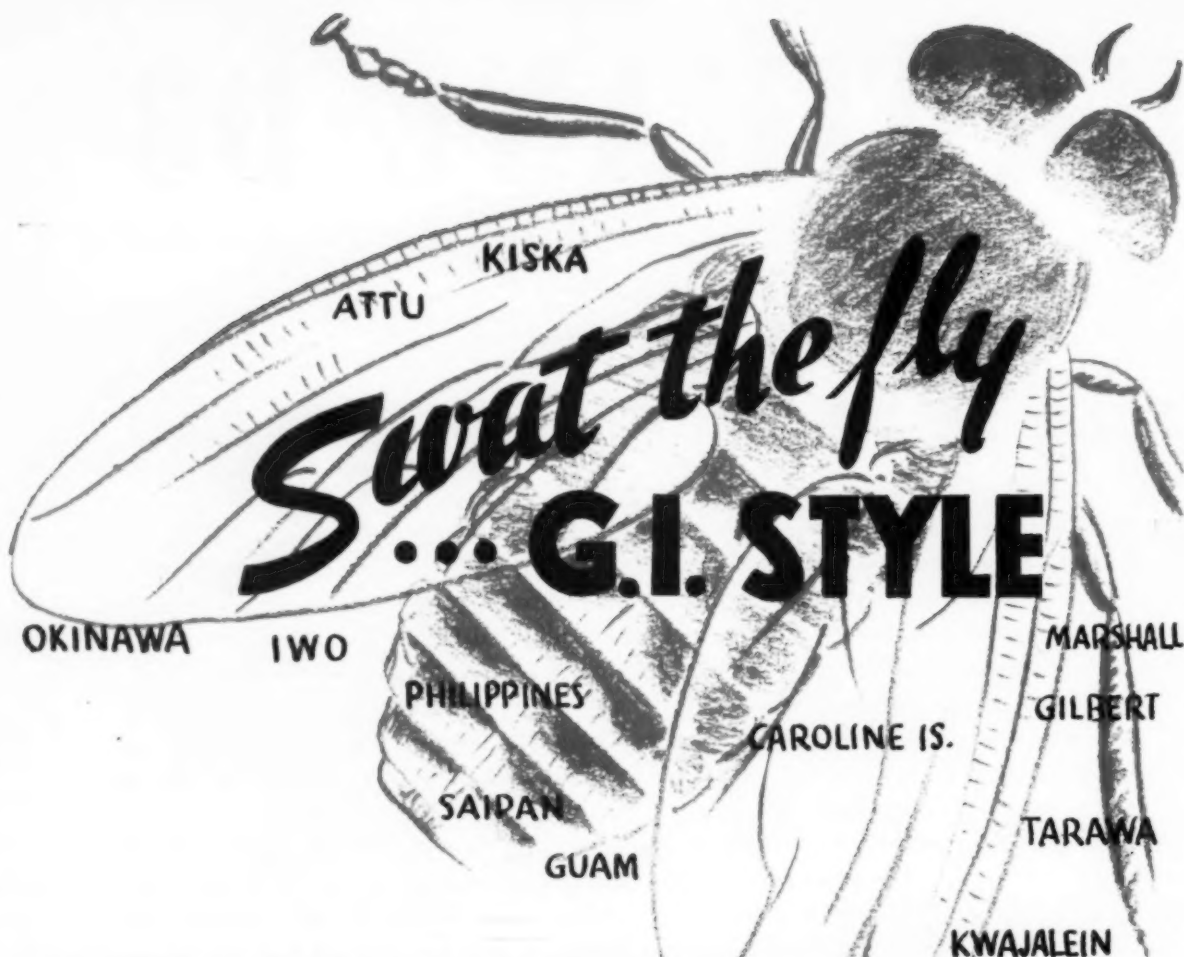
LETHANE is a trade-mark, Reg. U. S. Pat. Off.

S C O M P A N Y

WASHINGTON SQUARE  
PHILADELPHIA 5, PA.

Plastics... Enzymes... Chemicals for the Leather, Textile and Other Industries





This has been the first war in history in which a concentrated effort has been made to protect the fighting man from insects and their resultant diseases. In many parts of the world the problem of insects was more bothersome than the enemy. This means that millions of men have had wide experiences with various insecticides and are coming back to the United States very insect conscious. Because of this knowledge there will be a great demand on insecticide manufacturers to produce a product that will satisfy the needs of men who have been accustomed to using great quantities of the very best insecticides procurable. The insecticide picture is changing constantly. Restrictions have been eliminated and sufficient quantities of all insecticides are available to supply the *full* requirements of manufacturers of branded products. You should investigate *now* our wide range of DDT and Pyrethrum products compounded to safely obtain the results which buyers have been taught to expect.

The wide range of products being offered by Powell are available now for planning new and better insecticides . . . basic products that offer broader markets and greater profits for you.

IMPROVED PYRIN again available for civilian use. This outstanding insecticide concentrate now available for your postwar product.

**JOHN POWELL & Co., INC.**

One Park Avenue, New York 16, N. Y.





# BIG NEWS OF THE DAY

**Sensational New Disinfectant  
Offers Perfect Sanitation**



**YES, here is a miracle-like disinfectant that also cleans and deodorizes, in ONE operation . . . WITHOUT LEAVING ANY ODOR WHATSOEVER.**

Use Odorless Disinfectant EVERYWHERE for complete sanitation. It is non-irritating, dissolves instantly in water, and is completely stable in storage or in solution. Odorless Disinfectant has a crystal clear amber color . . . is highly germicidal . . . and constantly undergoes unbiased laboratory tests to check its efficiency.

Available in  
Federal Co-efficient:

- 2-3 Household Grade
- 4-5 Industrial Grade
- 6-8 Hospital Grade

Packed in 55 and 30-gallon  
drums 5 and 1-gallon cans

**FOR  
RESTAURANTS  
LAUNDRIES**

**Absolutely  
Non-Irritating  
Non-Toxic**

**FOR  
DAIRIES  
FARMS**

## SANITARY SOAP CO.

*Since 1921*

104 RAILROAD AVE. PATERSON 3, N. J.

*Manufacturers of Soaps in  
Liquid, Paste and Powder Form*

September, 1945

Say you saw it in SOAF!

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# KRANICH SOAPS

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CONCENTRATED  
LIQUID SOAP  
SHAMPOO

☆ ☆ ☆ ☆ ☆

POWDERED SOAPS

Pure Coconut  
U.S.P. Castile

☆ ☆ ☆ ☆ ☆

POTASH SOAPS

Soft Potash 40%  
U.S.P. XII Green

☆ ☆ ☆ ☆ ☆

Kranich Soap Company, Inc.  
55 Richards Street                      Brooklyn 31, N. Y.

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# KRANICH SOAPS

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# AQUAROMES

## CLEAR or CLOUDY

To suit your purpose

Felton "Clear Aquaromes" are completely soluble in water, leave no trace of oil film or cloudiness and delightfully and economically perfume a wide variety of products such as LIQUID SOAPS, SHAMPOOS, THEATRE SPRAYS, DEODORANT SPRAYS and many others.

Felton "Cloudy Aquaromes" mix readily with all water base products, to form a dense, milky, permanent cloud, pleasantly perfumed at a very low cost. Ideally suited for DISINFECTANT & DEODORANT SPRAYS, FORMAL-DEHYDE PREPARATIONS and AIR PURIFIERS.

Send us a sample of the product you want to perfume, either clear or cloudy, and our laboratory will recommend the correct AQUAROME.—Available in a wide variety of delightful odors.

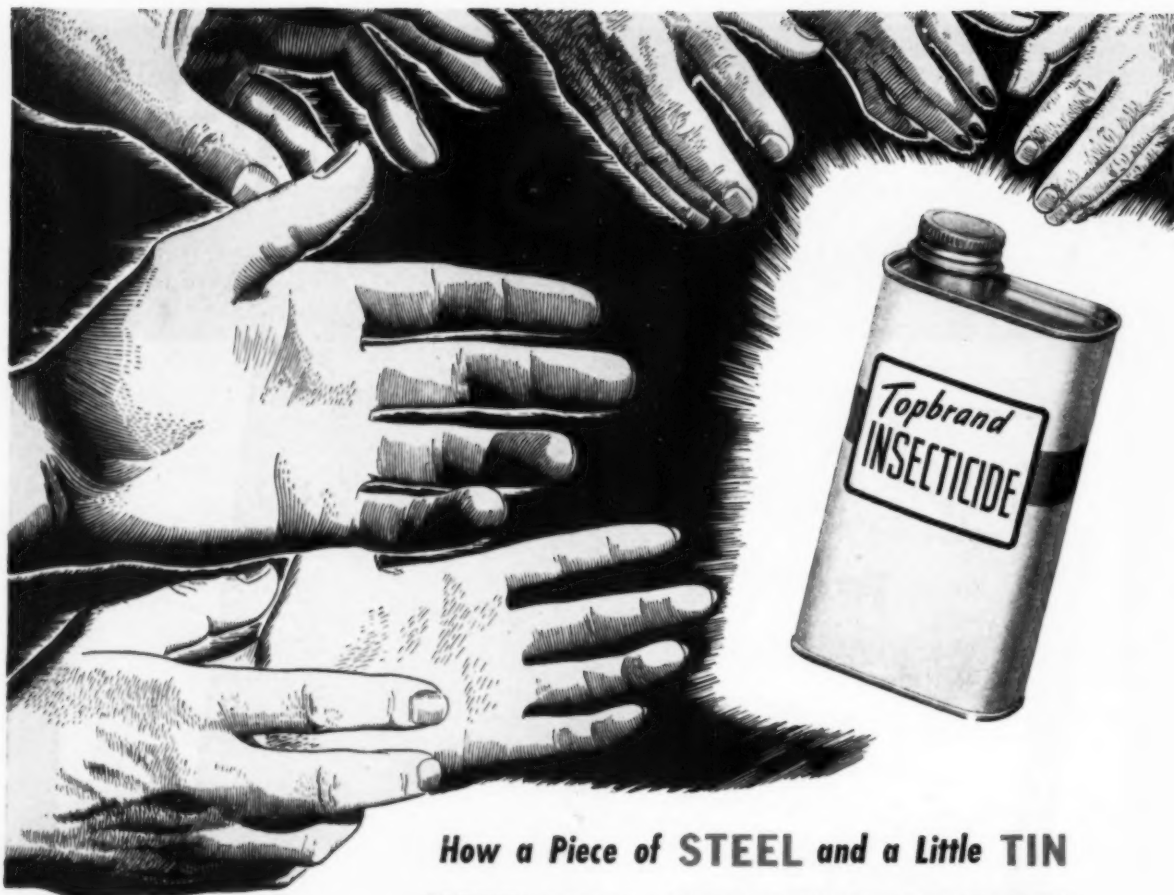


FELTON CHEMICAL CO., Inc.

395 BROADWAY AVENUE, BROOKLYN, NEW YORK

BRANCHES IN: ALBANY • ALBUQUERQUE • ANCHORAGE • ARIZONA • BOSTON • CHICAGO • CINCINNATI • CLEVELAND • DALLAS • DENVER • DETROIT • EL PASO • HARTFORD • HOUSTON • KANSAS CITY • LOS ANGELES • MADISON • MANHATTAN • MEMPHIS • MILWAUKEE • MINNEAPOLIS • MISSOURI • NEW YORK • OMAHA • PHOENIX • PITTSBURGH • PORTLAND • RICHMOND • ST. LOUIS • TAMPA • WASHINGTON • WICHITA

MANUFACTURERS OF AROMATIC CHEMICALS, ESSENTIAL OILS, PERFUMES AND FLAVORS



## How a Piece of STEEL and a Little TIN HELP SELL YOUR INSECTICIDES



*It's more than 98% steel,  
less than 2% tin*

### How Steel-and-Tin Cans Help Your Insecticides

1. Cans preserve toxicity.
2. Cans don't break, split, tear.
3. Require no costly packing or handling.
4. Are light, compact... economical to ship... save shelf and storage space.
5. Labels lithograph right on the cans... your brand name stays sharp and clear, never smears or tears or washes off.

• Yes... steel-and-tin cans are sales tools as well as trouble-free containers.

You see, labels can be lithographed right on the cans... with eye-catching designs which interest consumers. And cans help to build point of sale displays... tempting for your retailers to feature... inviting for their customers to see. That's one reason why retailers find it easy and profitable to sell insecticides packed in cans.

That's not all! Packed in steel-and-tin containers... which are more than 98% steel, less than 2% tin... your insecticides please consumers because light-excluding cans preserve the toxicity of your products and because they are shatterproof. So, if you want containers that really help to sell, pack your insecticides and chemical specialties in trouble-free cans... when Victory permits their unlimited use again.

### WORDS TO THE WISE...ABOUT CANS

A nationwide advertising campaign... using full-page, full-color ads... is familiarizing shoppers all over America with the many practical advantages of cans. Six national magazines and the magazine sections of Sunday newspapers from the Atlantic to the Pacific carry more than 29,000,000 printed messages this month.

**CAN MANUFACTURERS' INSTITUTE, INC., NEW YORK**

**NO OTHER CONTAINER PROTECTS**

**LIKE THE CAN**





Write for new 24-page  
booklet — RED SQUILLS

**STANDARDIZED  
TO THE POTENCY  
ESTABLISHED BY  
THE FISH AND WILD-  
LIFE SERVICE  
OF THE U. S.  
DEPARTMENT OF  
THE INTERIOR  
500-600 mg./Kg.**

# DETHDIET RED SQUILL

DETHDIET Red Squill is manufactured by a newly developed concentration and fortifying process, and is considerably more potent than the Red Squill generally available in recent years.

## S. B. PENICK & COMPANY

50 Church Street, New York 7, N. Y.  
735 W. Division Street, Chicago 10, Ill.

Telephone: COrtlandt 7-1970  
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## Biography of a Champ!



... It's the up-to-the-minute story of Thanite, the modern toxicant for insecticide sprays, which—as proved by the Peet-Grady test figures on the opposite page—is doing such an *efficient* job of killing flies and other insects *economically*! This 8-page Hercules booklet gives you all the facts on Thanite . . . What it is . . . What it does . . . How it's used. It describes many new advantages to manufacturers and consumers. "WHY THANITE?" is *must* reading for the man who wants to make the most effective sprays, at the lowest cost, to the greatest satisfaction of his customers!

# thanite\*

\*Reg. U. S. Pat. Off. by Hercules Powder Company

# WHY thanite

?



5% THANITE



77% DEAD  
100% KNOCKDOWN  
AA GRADE + 33.0 RATING

4% THANITE



69.3% DEAD  
100% KNOCKDOWN  
AA GRADE + 25.4 RATING

3% THANITE



61.8% DEAD  
100% KNOCKDOWN  
AA GRADE + 17.8 RATING

NAVAL STORES DEPARTMENT

**HERCULES POWDER COMPANY**  
INCORPORATED

961 Market St., Wilmington 99, Del.

Please send me your new booklet "WHY THANITE?"

NAME .....

TITLE .....

COMPANY .....

ADDRESS .....

NT-37

September, 1945

Say you saw it in SOAP!

99

## Official Test Insecticide . . .

**S**UPPLIES of the 1945 Official Test Insecticide for evaluating insect sprays by the Official Peet-Grady Method are available from the office of this Association. The 1945 O.T.I. is official for testing from June 1, 1945 through May 31, 1946. O.T.I. of any previous year is obsolete and should not be used.

Supplies of 1945 O.T.I. are available at \$5.00 per dozen six-ounce bottles to members of this Association. To others, there is a service charge of \$1.00 per dozen. Single bottles are \$1.00 each. Check with order is required.



### National Association of Insecticide & Disinfectant Manufacturers, Inc.

110 East 42nd Street

New York

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*Greater*  
**SOLVENT POWER**

*Faster*  
**ACTION for...**

**WITH THE VELSICOLS**



Contemplating the manufacture of DDT insecticides? If you are, the unrivaled advantages possessed by the VELSICOLS as solvents, accelerators and activators for DDT will be of vital interest.

**HERE'S HOW THE VELSICOLS WORK WITH DDT**

- 1** As solvents the VELSICOLS will hold up to 40% DDT.
- 2** Used as co-solvents with the desired concentration of deodorized kerosene the VELSICOLS guarantee stable DDT solutions at very low temperatures.
- 3** The VELSICOLS add AA knockdown to household and livestock sprays formulated with DDT.
- 4** As carriers and co-toxicants, the VELSICOLS penetrate the insect body, assuring complete effectiveness of the DDT.



The latest authoritative information covering the use of DDT in your formulations is available on request, as are samples of the VELSICOLS.

VELSICOL AR-50 and AR-50 Special for household sprays; AR-60 for cattle sprays and agricultural insecticides; NR-70 for airplane dispersal for mosquito control and for control of forest and shade tree insects.

**VELSICOL Corporation**

General Office: 120 East Pearson Street, Chicago 11, Illinois

MANUFACTURERS OF INSECTICIDES • SYNTHETIC RESINS • CORESIN CORE OILS • AROMATIC SOLVENTS

# ***ACCELERATION!***

Developments recently have been occurring at a pace which frequently renders advertising obsolete before it can be set up and published, and this tendency seems likely to continue. This applies not only to world and industry affairs, but to progress occurring within our own organization.

Under these circumstances we find it difficult to be specific about our products, our achievements, or our plans, and can only point out that we are making rapid progress in at least some of our post-war plans and urge our customers to keep us in close touch with their requirements and their problems.

No change has or will be made in our basic policy of serving as dependable suppliers of standardized high-quality insecticide materials to legitimate insecticide manufacturers. Our ability to do so continues to expand even though it has failed to fully keep pace with the increasing demands on it.

**Dodge & Olcott, Inc.**

180 VARICK STREET, NEW YORK 14, N.Y.  
BOSTON • CHICAGO • PHILADELPHIA • ST. LOUIS • LOS ANGELES  
Plant and Laboratories . . . Bayonne, N. J.

**TOPS** for general cleaning



## THE CLEANER DOES THE WORK

The amazing thing about FRANKLIN'S RUBBER GLOSS CLEANER is the way it *cleans by saturation*. There's no need for hard scrubbing—the cleaner *itself* does the work.

### IT'S CONCENTRATED—*makes 3 to 29 times its own volume*

Simply add FRANKLIN'S RUBBER GLOSS CLEANER to water for cleaning strength required and flood area to be cleaned. In five minutes the old wax and dirt on the floor will be in solution, ready to mop off. With this cleaner, you save labor, time, money and at the same time *increase the life of the floor*.

If you use it without wax, you'll find that FRANKLIN'S RUBBER GLOSS CLEANER also makes the floor *safer* because it is an anti-slip floor treatment and is so listed by the Underwriters' Laboratories, Inc.

#### FOR USE ON ALL SURFACES

FOR CLEANING WALLS AND FIXTURES—use FRANKLIN'S WALL CLEANER. It uses the same cleaning principle as our Rubber Gloss Cleaner but is especially prepared for walls, fixtures, trim, etc. Concentrated—1 gal. makes 30.



# FRANKLIN RESEARCH CO.

5134 LANCASTER AVENUE • PHILADELPHIA 31, PA.

*A full line of maintenance materials*



## Inertia—the tendency of anything to stay put

### • Funny thing about inertia:

It can creep up on you from one angle while you're busy with another aspect or a problem.

For instance: You have been improving your product during the years. War-time research and new developments have assured your product's future progress. No inertia here, all right, BUT—

### Don't overlook your package

What about your container? Are you certain that it is a help to your product? Has it stayed put while you were busy

improving your product?

Test the effectiveness of your package with these three questions: Is it economical? Is it efficient? Is it attractive enough to make the consumer point it out with a decisive finger?

### Our job at Canco

We're here to help you answer these questions with a big "Yes!"

Our specific job is to devise packages attractive enough to accomplish these three requirements and accomplish them well. We are qualified to do this because

of years of research and service.

Why not get the latest information? So that we may lend a hand, extend one . . . by asking our representative or writing us direct.



WORLD'S LARGEST MANUFACTURERS OF FIBRE AND METAL CONTAINERS



# DDT

## TECHNICAL GRADE

made by

# DU PONT

Du Pont DDT technical grade, because of the rigid control used in its manufacture, meets the high quality standard set for all Du Pont Products.

Tests and wide actual use indicate that Du Pont DDT technical grade is ideally

suited for the manufacture of emulsions, suspensions, solutions or dust mixtures.

We shall be glad to consult with manufacturers about their future requirements of DDT in anticipation of the removal of restrictions.

**SECURE YOUR OTHER FUTURE NEEDS...WITH WAR BONDS**

**"DEENOL"**  
**DDT INSECTICIDES**  
**AVAILABLE**  
**NOW**

"Deenol" is a trade mark of E. I. du Pont de Nemours & Co. (Inc.)

... to manufacturers of insecticides, but only for bona fide experimental purposes. There are various formulations and strengths.

**E. I. DU PONT DE NEMOURS & CO. (INC.)**

GRASSELLI CHEMICALS DEPARTMENT  
WILMINGTON 98, DELAWARE



**BETTER THINGS FOR BETTER LIVING...THROUGH CHEMISTRY**

---

# 1,000 Trillion Flies!

●

**T**HIS is the heading of YOUR Association's advertisement which recently appeared in the DAIRY INDUSTRIES UNIT!

YOUR Association's Advertisement has been circulated to nearly 17,000 paid subscribing dairy products plants where the control of flies and insects is paramount.

YOUR association's advertisement says: "Spray regularly every day now with a good insecticide...."

If you have a "good insecticide" and if you are not now advertising in the DAIRY INDUSTRIES UNIT, contact us immediately and get a larger share of this good dairy industries business!

●

THE OLSEN PUBLISHING COMPANY

505 W. Cherry St.

Milwaukee 12, Wis.

The  
ICE CREAM  
REVIEW



*the*  
MILK  
DEALER



*Journal*  
of the  
Dairy Industry



# HANDBOOK OF PEST CONTROL

The Behavior, Life History and Control  
of Household Pests

By ARNOLD MALLIS

**T**HIS new book is a thoroughly practical, complete and up-to-date study of pest control which will be invaluable to every insecticide manufacturer, pest control operator and entomologist. Approximately 570 pages in length, and containing 140 illustrations, it deals in a practical way with the behavior, life history and control of household pests.

While there have been other books in this field, Mr. Mallis' book is by far the most complete and up-to-the-minute practical text on the subject. It reflects insecticide developments as recent as those of the past few months, carrying for instance, the most recent findings on DDT, aerosol insecticides, insect repellents, etc. The emphasis throughout is on control measures, and the author covers fully all the commonly used insecticide materials and treatments. Fumigation is the subject of a special chapter.

An unusually complete list of references to the literature on household pests, insecticides and their use adds considerably to the value of Mr. Mallis' new book. Hundreds of references to the technical literature are listed.

## TABLE OF CONTENTS

Chapter	Chapter	Chapter
1 Rats and Mice	10 Psocids	19 Fleas
2 Silverfish	11 Bedbugs and Other Bugs	20 Flies and Mosquitoes
3 Springtails	12 Clothes Moths	21 Spiders
4 Cockroaches	13 Hide and Carpet Beetles	22 Mites
5 Crickets	14 Ants	23 Ticks
6 Earwigs	15 Bees and Wasps	24 Miscellaneous Household Pests
7 Termites	16 Stored Product Pests	25 Chemicals Used in Controlling Household Pests
8 Dry Rot Fungi	17 Spider or Ptinid Beetles	26 Household Fumigation
9 Wood-boring, Book-boring and Related Beetles	18 Lice	

HANDBOOK OF PEST CONTROL has standard high-grade book binding, cloth and board covers, 6 x 9. Priced at \$6.25 per copy (\$6.50 outside the U. S.). Check *must accompany* order. Orders for books to be sent on approval *cannot be accepted*, but the usual return privilege will be accorded where copies are returned unmarred within 10 days. Owing to present conditions, the first edition must be limited. Accordingly, an *early order* accompanied by check is suggested.

Published By

**MAC NAIR-DORLAND CO.**

254 West 31st Street

New York, N. Y.

MacNair-Dorland Co.

Enclosed is check for \$6.25 (\$6.50 foreign). Send me a copy of the new "Hand Book of Pest Control."

Name .....

Firm .....

Address .....

# FOR REPEAT SALES

## In Today's Competition

SUCCESS

HERE

ASSURES

SUCCESS HERE



### Until All the Boys Get Home

While the end of the war means an early return home for most of our fighting men, many will still be on duty thousands of miles away. They will continue to need the protection from disease and death afforded by HUDSON Sprayers and Dusters. But day after day, there will be more available for civilian needs. Right now HUDSON'S production lines are turning out great quantities to meet the pent-up demands of our good friends—our regular customers. Write us now for information . . . let us help you.

## HUDSON Helps Assure the Building and Holding of User Acceptance

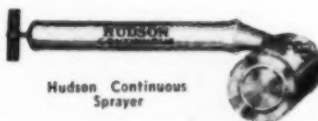
The housewife's *first* experience with your product is the *important* one. Prove to her that your insecticide, disinfectant, moth spray or deodorant does what you say it will do and she'll demand your brand for future purchases.

But to assure a successful first experience, be certain that the sprayer or duster you sell to *apply* your product does the best possible job.

With HUDSON Sprayers or Dusters you have that assurance. For each HUDSON Sprayer and Duster is designed for perfect application and easy use... is made to give your product the fullest possible opportunity to prove its effectiveness.

The HUDSON line includes the exact Sprayer or Duster you need to apply your products . . . one that will help assure repeat sales for your brand.

H. D. HUDSON MANUFACTURING COMPANY  
589 East Illinois Street, Chicago 11, Illinois  
Branches in Principal Cities in the U. S. A.



Hudson Continuous Sprayer



Hudson Duster



Hudson Electric Sprayer

Say you saw it in SOAP!

September, 1945



# MILOWAX

*The Superior Wax*



SELF POLISHING MILOWAX, made with pure Car-nauba, is different to other waxes. Contains no synthetics — contains no soap, therefore water will not emulsify the wax, wearing it off. Milowax is ammoniated, dries quickly, leaving pure wax on the floor. Recommended for linoleum, asphalt tile, composition flooring, varnished, sealed, shellacked or painted wood, terrazzo, marble, tile, rubber and painted or raw cement.

## TEN SALIENT FEATURES:

- |                            |                                   |
|----------------------------|-----------------------------------|
| 1. WATER RESISTANT.        | 6. NO SLIPPERY FILM.              |
| 2. DRIES TO A HIGH GLOSS.  | 7. ECONOMICAL.                    |
| 3. NO BUFFING REQUIRED.    | 8. NOT SOFT OR STICKY.            |
| 4. PROTECTS FLOORS.        | 9. LONG WEARING.                  |
| 5. GETS BRIGHTER WITH USE. | 10. SCUFF MARKS EASILY WIPED OFF. |

*Distributors of all Maintenance Supplies: WAXES • SOAPS • DEODORANTS • DISINFECTANTS • INSECTICIDES • LAUNDRY SUPPLIES • MACHINERY CLEANERS • RUG SHAMPOOS*

Use our **MILONITE SPECIAL CLEANER** with each purchase of wax.

LITERATURE AND SAMPLES ON REQUEST

## HOUSE OF MILO

BIRMINGHAM ALABAMA

*Shipments from*

ST. LOUIS - CLEVELAND - NEW YORK - PHILADELPHIA - RICHMOND

# *Synthetic* PINE DISINFECTANT

---

PINE INDU-CIDE WAS THE FIRST SYNTHETIC PINE DISINFECTANT INTRODUCED IN THE DISINFECTANT FIELD—AND TODAY IT ALSO HOLDS THE DISTINCTION OF BEING THE MOST POPULAR.

There are several reasons why Pine Indu-Cide has always been "tops".

The synthetic phenols used in its manufacture are the least irritating—resulting in a disinfectant with minimum skin irritant qualities. In other words, it's safer.

Pine Indu-Cide is manufactured from pure steam distilled Pine Oil, vegetable oil soap, Ortho Phenylphenol, Chloro-2-Phenylphenol, and water. Only the finest and purest ingredients.

Supplied in three Phenol Coefficient strengths:

COEFFICIENT 5

COEFFICIENT 10

COEFFICIENT 15

Where high freight rates over long distances are involved we suggest purchase of the high Coefficient grades for dilution with water upon arrival at your plant.

Pine Indu-Cide forms milky emulsions in water, its Phenol Coefficient value is guaranteed against both *Eberthella typhi* and *Staphylococcus aureus*.

The characteristic odor of natural Pine Oil Disinfectant is predominant.

( *As a house specializing in the manufacture of  
finest quality germicides for over a third of a  
century, we are proud to offer the Indu-Cides  
—we know you will feel the same pride in  
reselling them to your trade.* )

FOR A SAMPLE AND COMPLETE INFORMATION, WRITE

## Baird & McGuire, Inc.

St. Louis, Mo.  Holbrook, Mass.

# SANITARY PRODUCTS

## A SECTION OF SOAP

*Official Publication* National Association of Insecticide & Disinfectant Manufacturers

**A**S expected with the release of DDT by the War Production Board, the mad scramble of DDT insecticides to market has begun. Everybody appears to be out to "beat the gun." The clamor for raw material, for labeling and compounding information has been continuous for the past several weeks. For all the world, the DDT scramble reminds us of stories describing the Klondike gold rush,—except we fear that instead of gold, some of those who are rushing pell-mell into the field may come up with a headache or two. Too many people with no experience or background are jumping into marketing DDT products.

Although the latest information appears to indicate that DDT is not as dangerous as at first supposed, this is not as yet a fully confirmed fact. Those who are vulnerable to damage suits are making haste slowly. Some of the products coming on the market are reputed to contain only a small fraction of one per cent of DDT. Many of them will probably be forgotten a year or so hence. But in the meantime, the insecticide industry, both household and agricultural, has been thrown into a state which is closer to chaos than anything we have observed over the past twenty-five years.

As soon as the pot stops boiling long enough for the Insecticide Division of the USDA to observe exactly what is taking place, we look for the situation to be clarified by the issuance of a set of regulations covering composition, labeling, and other points in connection with DDT insecticide products which will sharply curtail wild-cat operations.

**T**O an "official" of the U. S. Public Health Service goes the palm for the prize publicity release on DDT. In the apparent effusion associated with the removal of all bans on DDT by WPB, the Public Health Service tells the public through newspapers how with "a dollar's worth of DDT (about three cupfuls), a quarter's worth of kerosene and a soapy emulsifier," a homemade insect spray may be produced which will solve the average householder's insect problems for a year or more. Health hazards are minimized.

First of all, we would like to enter the home of the USPHS "official" responsible for giving this ill-advised misinformation to the newspapers and spray it completely with the suggested concoction even to shades, wall paper, silk drapes, dresses, etc. And then obtain the opinion of his wife. Completely discounting any health hazards, if there are any, such a product is on its face unfit to use except where objectionable residual odor, staining, etc. are not important. To state that "ready mixed spray" costs more is to parade his ignorance of insecticides. A gold ring always costs more than one made of brass.

This unfortunate release by USPHS, we have a hunch, may be traced to that disease so common in Washington government departments, "publicity hunger." It looks like an attempt to grab a spot in the publicity sunshine by somebody who does not know what it is all about as far as insecticides are concerned. There have been too many boners already in connection with DDT publicity—and in this case, immediate and full retraction by USPHS obviously is the answer to the prize boner of them all.

# ADULTERATION *and* MISBRANDING

By  
*C. C. McDonnell*

The First of a Series  
of Three Articles  
on This Subject

**A Review of Some of the Common Mistakes Made By Manufacturers of Insecticides and Sanitary Products in Labeling their Products in Violation of Provisions of the Insecticide Act of 1910**

**T**HE Federal Insecticide Act has been in effect for thirty-four years, and it is only necessary for one to review the Notices of Judgment issued under it during this period, to be struck by the gross misbranding that has been practiced in the marketing of products subject to its provisions. It would appear that in many cases the manufacturer had searched the dictionary for all the superlatives he could find and used them in his labeling.

Not all of the misbranding, however, was of this character, although some of it was equally flagrant. The law does not require a statement of weight or volume on the label, but if such a statement is made it must be correct. Twenty-six per cent of all criminal and seizure action cases brought under the act based on shipments made during the first two years that it was in effect, carried a charge of either short weight or short volume, —the amount of the shortage in some cases being as high as 15 per cent.

Many cases were based on the lack of an ingredient statement as required by the law, or on an incorrect statement. In some cases this was due to ignorance of the terms of the law, or to carelessness, and in others to a difference of opinion with respect to whether an ingredient was active or inert. Some manufacturers took the

position that an ingredient of a product that was essential to its production, or to make it effective,—water, for example, to bring it into solution, or a bait or food to attract the insects and cause them to eat,—was an "active" ingredient. The law defines "inert ingredient," as applied to insecticides, as a substance "which does not prevent, destroy, repel, or mitigate insects." The courts in interpreting this provision have held that it must be construed literally, and to take any other position would render the enforcement of the law impractical.

Another provision of the law that has caused manufacturers much trouble is that which defines as "misbranding" any insecticide or fungicide "the package or label of which shall bear any statement, design or device regarding such article or the ingredients or substances contained therein which shall be false or misleading in any particular." The stumbling block in this is the word "misleading," the interpretation of which is frequently a matter of opinion. Many ambiguous and indefinite statements appear on labels. Some of the more common ones are "kills insects," "kills . . . and other insects," "kills household insects," "kills . . . and other parasites infesting live-stock," "destroys disease germs," "for fungous diseases," "100 per cent active." Others more subtle are frequently employed. The use of such

expressions constitutes misbranding. In enforcing the law it is not necessary to show that the misleading statement was used with fraudulent intent. As pointed out by the Court, in a case arising under this act, it would be utterly impossible to enforce a statute of this character "if it were necessary, before conviction could be secured, to bring home to any particular individual an intent to deceive." In a similar case under the Food and Drugs Act of 1906, which carried the same misbranding provision, tried before the U. S. Supreme Court, the justice, in delivering the opinion, stated: "The statute is plain and direct. Its comprehensive terms condemn every statement, design and device which may mislead or deceive. Deception may result from the use of statements not technically false, or which may be literally true. The aim of the statute is to prevent that resulting from indirection and ambiguity, as well as from statements which are false. It is not difficult to choose statements, designs, and devices which will not deceive. Those which are ambiguous and liable to mislead should be read favorably to the accomplishment of the purpose of the act."

The question of adulteration usually presents less difficulty to the administering officials. It is generally not difficult to show adulteration. However, here again manufacturers have





gotten into difficulty through their misinterpreting the law,—their view being that a product could be adulterated only by adding something to it. The Insecticide Act, under the adulteration section, provides, among other things, that a product is adulterated, "First, if its strength or purity fall below the professed standard or quality under which it is sold; second, if any substance has been substituted wholly or in part for the article." If it had been the intent to limit adulteration to cases where something had been added to the original substance through human agency, the first provision would not have been included. Under this provision a product is adulterated if it contains less of one or more of the active ingredients than claimed, no matter how the shortage came about. Even if it is a natural product, such as powdered derris root, or tobacco dust, and contains less rotenone, or less nicotine, than declared on the label, it is adulterated under the terms of the law. Likewise, a product that contains less of the active ingredient than claimed on the label due to decomposition between the time it was packed and before its sale is adulterated.

**I**N the labeling of household and animal insecticides the tendency has been to recommend a product for too many uses. In the early days of the law it was not unusual to find a

preparation recommended for almost every kind of insect infesting the home, those attacking animals, those destructive to fruits and other crops, and frequently as a disinfectant and deodorizer as well.

Examples of such labeling are: Insecticide A (a dust preparation consisting of 50 per cent of free sulphur, less than 1 per cent of naphthalene and the remainder filler). "Kills lice, fleas and all kinds of vermin and insects on fowls, animals, . . . destroys insects and bugs on plants, bushes and vines, . . . exterminates moths, roaches, bedbugs, ants, etc. A disinfectant for the prevention of contagious diseases, destroys germs. A reliable and effective inhalant which destroys germs, prevents the spread of infectious diseases. For preventing the spread of roup, gapes and other infectious diseases. A disinfectant for poultry houses, coops, stables, sinks, closets, drains, urinals, garbage cans, etc."

Insecticide B (a coal tar oil-soap-emulsion.) "A non-poisonous preparation. . . Exterminates roaches, bedbugs, water bugs, buffalo bugs and all objectionable insects. It cures mange, gapes, chicken and hog cholera, and all parasitic diseases. . . Sprayed in stables, cow-barns, hen houses, dog kennels, piggeries, slaughterhouses, etc., prevents all bad odors, purifies the air, kills all disease germs, and keeps all animals healthy and free from vermin. . . Destroys caterpillars, scale, lice and sucking insects on plants. For foot rot, foot and mouth disease of cattle, ringworm, roup of poultry. . . Heals all skin diseases. In the sick room the air may be purified by suspending cloths wet with a solution 1-60. . . A few drops in the water pan of the furnace will quickly purify the air of the entire house. . . The most efficient disinfectant known, and the most economical. The use of a solution of one teaspoonful to two quarts of water as a facial wash after shaving is a reliable remedy for eruptions and diseases of the skin. . . Will prevent dandruff and promote the growth of hair and prevent it from falling out. . . Used in the bath is an exhilarating tonic, accelerates the circulation, heals chafed and chapped surfaces and

eruptions of the skin. . . Used as a gargle, two drops in a glass of water, is an excellent remedy for catarrhal affliction. . . Will cure the worst case of sore throat. . . Mothers will appreciate the use of it for children as a safeguard against disease."

While there is still a tendency in many cases to make excessive claims for a product, labeling such as here quoted is a thing of the past. Other types of products found on the market and which had a wide sale, were out and out cheats. These included so called medicated salt blocks, which consisted of ordinary common salt to which a small amount of sulphur, sodium nitrate or other chemical had been added, to be placed before cattle and other live stock and bearing claims to keep them free from lice, ticks, flies, mites and other insects. One such product also claimed that it was an effective remedy for all kidney troubles and stomach disorders of live stock, that it would prevent colic, blind staggers, distemper, Texas fever, and protect hogs from cholera under all conditions.

Preparations consisting of a dilute solution of calcium sulfide, or tablets containing calcium sulfide, to be given to poultry in the drinking water or mixed with their feed, and claiming to keep poultry free from lice and all types of external parasites, were numerous. They bore such claims as, "If given twice each month poultry will stay free of parasites. . . It prevents the spread of disease. . . Contains one of the greatest disinfectants known to medical science. . . A tonic and blood purifier. . . A remedy for roup, colds, gape worms, cholera, white diarrhea. . . Health builder, disease preventative. . . Fowls produce more eggs. . . Causes the fowls to grow faster." The claim being that the product generates a poisonous gas which is expelled through the skin of the fowls and poisons the insects. Chickens do not have sweat glands and do not eliminate waste products through the skin.

Extensive tests by scientists have shown that external parasites of animals cannot be controlled through internal medication and that prepara-

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# The Carnauba Wax Mess



GOVERNMENT control of business seems to have reached its acme of ineptitude in the handling of the importation, distribution and pricing of carnauba wax. According to well informed opinion in the floor wax trade, the actions of the OPA and the inaction of the WPB have combined to build up a situation in which several large manufacturers have cornered a major share of the spot stocks of carnauba wax, while dozens of smaller manufacturers are completely without supplies, and no carnauba wax is currently available through the normal importing sources.

The dubious distinction of responsibility for the current mess would seem to be shared about equally by the two government agencies — OPA for its refusal to raise ceiling prices and WPB for its unwillingness to put carnauba wax on allocation and to force those with ample wax stocks — obtained, the trade believes, by circumventing OPA regulations — to share them with other carnauba wax users. And with the end of the war, and the trend toward *relaxing* of government controls rather than imposition of *new* controls, the time for WPB to act seems to have slipped by. A month or two ago they might have been able to justify a pooling and redivision of carnauba wax inventories under the guise of war time necessity. Now, apparently, that opportunity is gone. The wax manufacturers who have built up their carnauba inventories by finding a way, as some slick operators always will, to get around government controls, will apparently be allowed to keep these heavy accumulations, while other

wax manufacturers are crying for a few bags of carnauba to keep them operating.

There are a number of apparent misconceptions in the trade as to the exact manner in which OPA ceilings have acted to create the present maldistribution. Some wax users are under the impression that foreign buyers have been taking all of the Brazilian stocks by simply bidding a few cents above the conveniently fixed and unchangeable American ceilings. This may have taken place to some limited extent, reports say, but, according to the OPA the American market has been getting its normal share of Brazilian wax exports. The difficulty is that a major share of this wax has been going direct to two or three users rather than through the normal importing sources to the rank and file of the floor wax trade. As we get the story, these large firms having South American affiliated companies arrange for purchase of carnauba wax by these companies at the ruling market price on the spot. The wax is then in turn resold to the American company at the OPA ceiling — all perfectly legal — and the South American firm presumably takes a temporary loss on the transaction which might very readily be made good at some later date.

A number of users of carnauba wax have approached the OPA, the WPB, the Office of Civilian Requirements, the State Department, and other agencies, with complete lack of success in solving this acute supply problem. Indeed the very multiplicity of government departments and agencies concerned with the problem militates against any ready solution, as the possibilities of "buck passing" are obvi-

ously great. The OPA is understood to take the stand that an increase in the ceiling prices would not result in any appreciable increase in supplies. They point out that recent imports compare favorably with those of previous corresponding periods, and the difficulty is one of maldistribution here, in that those imports are in the hands of only a few users. This problem of redistribution, they say is outside their jurisdiction and lies within the responsibility of the WPB.

The WPB has dodged the problem successfully too, and has passed the buck along to the next agency in line, by adopting the position that their authority is limited to providing material for *war* production only. Floor wax for civilian use, and carnauba wax for use in its production, are definitely not war-connected items.

In answer to a recent inquiry from a wax manufacturer, who had been referred to WPB by OPA, they suggested that if there are any restraints of trade involved in the present situation, "these are the concern of the Department of Justice." Doubtless the D of J would have some one else to refer the problem to.

While the government agencies thus successfully justify their position, the wax famine continues except that it does not affect the handful of companies who found a way to get around the regulations successfully and get a long head start toward making a small and profitable monopoly out of the floor wax business.

The following letters from floor wax manufacturers to *Soap and Sanitary Chemicals* have a definite ring of authenticity about them, and would seem to be in general agreement as to

the broad outlines of what is happening in the wax market.

Indirectly, the OPA control of carnauba wax importations from Brazil has contributed to a virtual monopoly in the floor wax industry by two of the leading companies in this business, whose resources have permitted them to establish Brazilian connections to negotiate the purchase of carnauba wax, with representatives in Brazil. Quite naturally this has given them a very decided advantage in securing supplies.

It is common knowledge in the trade that special arrangements have been made by these two companies in securing this material, and this would seem quite obvious in view of the fact that no offerings have been made by Brazilian exporters of carnauba wax to any other importers during 1945 at ceiling prices.

The solution of this problem, in my opinion, cannot be found in the lifting of OPA ceiling prices in Brazil. The situation has gone too far to be remedied in this manner. Immediate assistance should be rendered by the Government through smaller war plants, or some other agency empowered to buy wax in Brazil at whatever price they must pay. This wax should then be allocated on a fair and equitable basis to large and small concerns alike. If necessary, the Government should subsidize the difference between the purchase price and the present ceiling price in the same manner that the American farmer has been subsidized in the distribution of his crops to the American market.

As we face the problem of reconversion, small business can and must be an important factor in its solution. Using my company as an example for the rest of the industry: We have approximately 40 employees and I cannot at the present time, with prevailing conditions, see how I can stay in business for another six months unless we have definite and immediate action from the Government on this question.

\* \* \*

*Considering the splendid way in which WPB has allocated raw materials for the chemical industry, so that all manufacturers might have a fair share of available materials, it seems a shame that they should have neglected to protect those hundreds of manufacturers who use large quantities of carnauba wax. The majority of wax consumers are actually completely out of wax and unable to obtain a supply necessary to carry on their normal business, even to fill orders for the Navy, carrying AA-1 priority.*

*This shortage, it seems, is caused by the fact that out of a recent importation of 1,200,000 pounds of carnauba wax two manufacturers received 937,000 pounds — leaving the*

*crumbs to be divided among the hundreds of other users. It looks to me as if the manufacturers who received the lion's share of this wax were either hoarding or are in some way attempting to control the carnauba market.*

*I think the WPB should not only investigate this condition but should also place this item on allocation at once.*

\* \* \*

There is something definitely wrong with the carnauba wax situation. Not only on carnauba wax, but ouricury wax seems just as bad.

My understanding was that 8700 bags of carnauba wax came into the country last week and we were unable to obtain any of it. We have a lot of orders on hand for it but nothing came through. It appears that the people who are getting that carnauba wax are apparently not paying the ceiling prices or are not paying basic operations. There's something wrong someplace. Those favorite few who seem to have direct control with shippers are apparently circumventing some of our laws.

There are a number of causes for the current wax shortage. For one thing certain shippers have made special arrangements in Brazil to ship direct to some of the larger companies. Also, it appears that the harvest is being held by the Brazilian Government for higher prices on which the OPA will not act. It also appears that the margin between the C.I.F. price in New York and the selling price is not sufficient to allow importers and dealers to deal in carnauba wax satisfactorily so that they apparently are not pushing the subject too much.

The same situation holds true on ouricury wax which, while not as good a wax for floor wax manufacture could be used in some portion during the present emergency.

The industry should call a meeting at a central point and attempt to shape up a program for relief, perhaps by an arrangement thru the State Department with the Brazilian Government to determine an equitable price, and allow a fair margin so that dealers and importers can make their usual percentage of profit.

Fundamentally, it's going to have to start with the State Department in an attempt to get a proper price at Brazil. My own personal opinion is that the situation on carnauba wax has never been good—it's always been bad and I have, for a number of years, attempted to interest certain domestic manufacturers in the production of synthetic waxes so that we would not be dependent upon a market in Brazil.

\* \* \*

*I have been in close contact with some of the largest importers of carnauba wax. They indicate that this critical situation on carnauba is caused by two or three of our very large wax consumers; manufacturers of na-*

*tionally advertised floor waxes and polish.*

*As you know, our government pegged the price of carnauba wax in Brazil. These large consumers have Brazilian corporations which do their buying, and in some cases do refining of carnauba wax. These Brazilian corporations are not in any way governed by our ceiling prices. The procedure is simple. All they do is buy the wax at the prevailing price in Brazil, even though it exceeds our ceiling, and sell it back to the mother company at the ceiling price, which very gracefully eludes the purpose of a pegged ceiling price, and incidentally also keeps the parent company in the clear as far as violations are concerned.*

*It is the estimate of these big wax importers that I spoke to today, that approximately four million pounds of carnauba wax was bought this year by two of the largest operators. In my opinion, this is far more than they would normally need for the next few months, and by their action they have not only created a shortage, but also a panicky situation which has led to black market operations already. Last week, I heard of one company paying \$1.25 per pound for a bag of No. 1 Yellow, the ceiling price on which is 84c per pound.*

\* \* \*

For some time we have recognized the fact that several of the large users of carnauba wax are getting good shipments. The other day one of our salesmen reported that one of his customers had told him that a representative of one of the larger companies had made the statement that their company now controls the carnauba wax in this country. This is of course merely hearsay. Whether or not this statement was actually made, I could not guarantee. Nevertheless that is the report as it came to us.

I have been concerned over this situation for some time and have made numerous efforts through the OPA, WPB, OCR, the State Department and other agencies to secure relief — all to no effect. The OPA admits that considerable stocks have been accumulated by some domestic users and recognizes that a more equitable distribution would be desirable. This in itself indicates that they know there is something going on, and certainly it seems to me to be well within their powers—and their duties—to correct the situation which they themselves tacitly admit is wrong.

The question is, why do these several "domestic industrial users" get the carnauba wax to the exclusion of shipments to the es-

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*Photo Courtesy Fish and Wildlife Service*

## RODENTICIDES—Present and Future

**L**ESS than three years ago an article entitled, "Rodenticides — Past, Present and Future," was published dealing with the status of rodent control agents during wartime. A rather pessimistic outlook was presented, since thallium sulphate, red squill and strychnine were all becoming critical materials—and there was nothing in sight to substitute for any of them. Since 1942, the situation has changed to a marked degree.

War has continued and some of the serious problems of rodenticide supply have become even more acute. This is most true of the thallium situation. Because thallium was admitted to be the best raticide available, it was adopted for the use of the trained Rodent Control Officers of the Navy operating in forward areas where rodent-borne diseases were present, and it has been used in increasing amounts since the start of the Pacific campaigns. In addition to the Naval requirements, the Army has started pur-

By

*Justus C. Ward*

*Wildlife Research Laboratory,  
U. S. Fish and Wildlife Service*

chasing thallium for the use of trained Civil Affairs Officers in bubonic plague areas. These two demands have tended to utilize entirely the limited amount of thallium refined in the United States. In order to guarantee the needs of the Armed Forces, thallium was placed under allocation by the War Production Board. Since this poison was available in adequate quantities from European sources before the war, an effort is being made to survey the

current situation in the captured and liberated countries through the cooperation of the Foreign Economic Administration. Small lots have been uncovered already, and if hidden stocks are found in Germany, it is conceivable that the supply situation on thallium sulfate may change with unexpected suddenness. (Late in August thallium was taken off allocation by the WPB and there are thus no longer any restrictions on civilian use of such supplies as may be obtainable by users. Editor's Note)

The red squill situation, on the other hand, has been markedly different. As soon as military operations in North Africa had reopened the principal ports from which red squill had been shipped, and the areas in which it grew, arrangements were set up whereby purchases of squill were made by the U. S. Commercial Company, the only agency empowered to do business in a theatre of action. The "chips" were brought into the United States,

# RELEASED

## FOR HOME-FRONT USE



**T**HANKS to a partial release by the War Production Board, Pennsylvania Salt Manufacturing Company will soon make this sensational insecticide available for commercial use.

Having produced DDT for the U. S. Government—for controlling the spread of louse-borne typhus in Europe and for control of insect-borne tropical diseases in the Pacific, Penn Salt is processing Penco DDT in dust and spray bases for convenient, effective use by professional exterminators and householders.

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where they were allocated to different dealers who were equipped to "fortify" the resulting powder to a satisfactory and effective product. This action was necessary, since the quality of the raw squill was too low to make the preparation of a good killing agent possible, without the use of this process. Importations were continued until at the present time there is enough red squill in the United States to fill all demands. Although the quality of the "chips" which have been imported more recently, is better than many of the earlier lots, it is still recommended that all red squill be "fortified" to a standard strength of no less than 600 mg/kg. This toxicity conforms to the specifications set by the U. S. Fish and Wildlife Service for wartime control, but it is hoped that as the price of red squill returns to the prewar level, it will be feasible to "fortify" to a more toxic product. This action would insure a higher degree of rat control from the use of this particular poison. It is with considerable satisfaction that the statement is made that adequate quantities of red squill are available once more.

The same optimistic statement may be used to describe the zinc phosphide situation in general. This agent, which has been proven to be one of the more effective rat, mouse and field rodent poisons, is being manufactured in the United States in substantial quantities. An Army purchasing program for zinc phosphide has created a temporary shortage of this poison, but it is probable that the stringency will pass quite rapidly, and adequate supplies for all civilian needs will be produced.

Other of the older rodenticides and fumigants which are not being controlled by the War Production Board, such as strychnine, carbon disulphide, methyl bromide, calcium cyanide products, chlorpicrin, are available in varying amounts. In fact, strychnine is the only one of this list which is at all "short," all of the other chemicals being available in adequate amounts. Some time ago, it was felt that strychnine might become almost non-existent on the United States market. That apprehension failed to ma-

terialize, although stocks have reached a very low level. Relief measures are being considered, and it is hoped that essential needs will be met without instituting rigid control, although the immediate situation is not too reassuring.

Certain other well-known rodenticides are chemicals which have had war time uses of sufficient importance to justify War Production Board allocation. The most important of these is arsenic. For example, white arsenic was under strict control until late in August, although a small order exemption of 650 lbs. per quarter allowed limited quantities for rodent control.

Barium carbonate and yellow phosphorus were both under War Production Board control also, but 1000 pounds of the former and 10,000 pounds of the latter chemical could be purchased under small order exemption clauses. Four hundred pounds of sodium cyanide was also allowed each month under these same provisions, as long as allocation controls remained in effect.

Summarizing this analysis, it may be observed that thallium, which for a long period has been unobtainable for rodent control, is now off allocation, but supplies may not yet be adequate. Red squill is available in substantial quantities, and the supply outlook is improving. Zinc phosphide, arsenic, barium carbonate, carbon bisulfide, methyl bromide, calcium cyanide products, chlorpicrin and yellow phosphorus are currently available in adequate quantity, and now free of government controls. All in all the situation is markedly improved over that described in 1942, when supplies of the well-known toxic agents are the only factors considered.

**A**NOTHER encouraging report may be made, however, at this time. Since 1942, a great deal of work has been done to find substitutes for or improvements in the well-known economic poisons. The discovery of DDT in the insecticide field is one of the best illustrations of what is being accomplished. At the same time that entomologists and chemists have been working on finding new ways to use

DDT, and searching for improved substitutes, another group of research men have been seeking new rodenticides. Two groups have been most active in this program, which has been stimulated by grants of funds from the Office of Scientific Research and Development. In the first of these projects, Dr. Curt P. Richter of Johns Hopkins University developed and tested a new rodent control agent called alphanaphthylthiourea (ANTU). The history of its discovery, and certain of its characteristics should be released from Dr. Richter's laboratory in the near future. It will be enough to state here, therefore, that the Fish and Wildlife Service has found ANTU to be an excellent control agent for Norway rats, but to be much less effective against black and alexandrine species. The conclusion was reached that the greatest field of usefulness for ANTU would be in areas where the Norway rat is the principal species present.

Almost concurrently with Dr. Richter's program, another project was being carried out in the Wildlife Research Laboratory of the Fish and Wildlife Service, at Denver, Colo. In this laboratory, a series of studies was functioning either to discover or to synthesize effective substitutes for thallium, strychnine or red squill—and to find new agents superior to these common poisons. In "screening" a large number of chemical compounds from a variety of sources, one material made an outstanding showing. The invoice number of this substance was 1080, so the substance has been studied under that code number ever since its discovery. Chemically, 1080 is sodium fluoroacetate, resembling ANTU to the extent that it is a synthetic organic compound. This similarity is not carried much farther, however, since 1080 is highly toxic to all species of rats, as well as to all of the field rodents on which it has been tested. ANTU has such low toxicity to field rodents such as ground squirrels and prairie dogs, that it cannot be considered for their control. Both 1080 and ANTU are dangerous to dogs although 1080 is by far the more toxic of the two. The same general thing is true of cats, so

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# D·D·T AEROSOL BOMBS!



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# INSECTICIDE RESEARCH

## A Review of The Constitution and The Toxic Effect of Botanical and New Synthetic Insecticides

By P. Luger, H. Martin and P. Mller

*Helvetica Chimica Acta*, Vol. 27, No. 4, pp. 892-938 (1944)

Reviewed for *Soap and Sanitary Chemicals* by  
Dr. E. G. Thomssen

MANY incorrect statements have been made regarding the discovery of DDT. In this scientific discussion of the research which led to its discovery, the actual facts are authentically revealed by those who found it. Geigy & Company have prepared an English translation of the paper entitled "The Constitution and Toxic Effect of Botanical and New Synthetic Insecticides" read in January, 1944 before the Basle Chemical National Research and Medical Society. This article sets forth the research work leading to the discovery of DDT.

A rather brief review in simple technical language of the subject matter hardly does credit to the careful and thorough work through which DDT as well as other synthetic chemicals with insect killing properties were made possible. It is of especial interest to know that the investigators in their research have classified insect toxicants with chemical groups. These are compiled in a series of tables, usually pointing out the insecticidal effective, non-effective and useless configurations.

The report of the investigations may be divided into several sections. The opening remarks in the paper describe the methods of insect control by respiratory, stomach and contact poisons. It then elaborates on how these poisons act to control chewing and sucking insects and especially the method by which contact toxicants enter insects' vital parts. Such poisons require first of all the property of being lipid soluble in order to permit penetration through the epicuti-

cula or the lipid and lipid proteins' "raincoat" into the nerve endings.

Late in the 20's experiments on sulfo groups containing water insoluble moth poisons were first undertaken. In *Helv.* 27:71 (1944) properties of new moth-proofing agents are described. This work which was pursued with three species of moths led to expansion of the work. In 1934, after trying out numerous compounds and discovering certain condensation products of isatin-5-sulfonic acid with 2 mol chlorophenol as moth poisons, but never produced on a commercial scale, the authors state: "We could not see clearly through the maze of literature on this subject with its contradictory findings, and we therefore decided to let Nature be our guide."

This course of investigation then led them to investigate plant lactones and they started these investigations with vulpinic acid, a yellow insect poison found in lichens. Compounds made from this acid proved to be effective insecticides. Thence they directed their studies to rotenone bearing products and pyrethrum. Various syntheses were carried out with vulpinic and vulpinic acids and it was found that the lactone group alone is not sufficient to develop a strong toxic activity. Later chemically related groups of dehydracetic acid and benzotetronic acid esters and methyl ketones were investigated. From these studies, chemical groupings were found to represent effective insecticidal properties. These groupings, however, could not be used for moth control because they are rapidly rendered inactive by the action of light.

From this point the investiga-

tions took on a new direction due to the discovery that Polar Red, a neutral dyestuff, killed moths on dyed woolens. After completing a series of aromatic esters, it was found that only one, p-chlorophenol-p chlorobenzene-sulfo-ester, possessed high toxicity. Many products, including other dyestuffs, were tested as stomach poisons for moths, and certain groups were found to be effective. Of these 4,4 dichlorodiphenyl-sulfone which contains the same condensed chlorobenzol system as DDT was found to be an excellent stomach poison.

Dr. Mller then undertook investigations using other insects than moths, mostly flies, for testing purposes and discovered a compound that was a good contact insecticide. Its constitution was dichloro-diphenyl-trichloro-methyl-methane or dichloro-diphenyl-trichloroethane, better known as DDT. This product is made by the condensation of 2 molecules of chlorobenzol and chloral. It had been known for a long time but possesses insecticidal properties never before observed as effectively in a synthetic chemical. It is different from natural contact insecticides like derris and pyrethrum in being stable to both sunlight and biological oxidation.

Compounds of DDT were made and biological examinations carried out in various fields of application as insecticides. It was found that rotenone and pyrethrum insecticides often permitted insects to recover from small or insufficient doses whereas this was never the case with DDT combinations. These combinations were given coined names like "Gesarol" used for agricultural insects, "Neocid" for insects affecting man and animals, "Neocidals" for ecto-parasites in the veterinary science field and "Gesopon" for DDT emulsions for soil pests. An interesting fact is that "Gesarol" became known in the agricultural districts through control of stable flies.

At this point the paper goes on to describe the physiological phases of the subject, illustrating the action of DDT as a nerve poison upon an insect's contact with it through its legs.

Next it is pointed out that since the condensed chlorobenzol system is

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present in respiratory poisons (chlorobenzene), stomach poison (dichlorodiphenylsulfone), contact poison (DDT) and inhalation narcotics (chloroform), "a possible method of obtaining new contact poisons is to try to introduce the radicals of other inhalation narcotics into the toxic condensed chlorobenzene system, possibly even into other components known to be poisonous to insects." A list of many of these combinations, mainly of theoretical interest, with comments as to their effect as contact insecticides is then presented. Interesting inferences, particularly as to their so termed distribution coefficients, related to their lipid solubility, are made. From these considerations this interesting conclusion is drawn as to the structure of both synthetic and natural insecticides, "A highly effective product . . . must have a toxic component and have groups attached thereto which assure absolutely pronounced lipid solubility. The most toxic component is worthless in the absence of the lipid soluble component because a penetration into the body of the insect is scarcely possible.

"The path which must be followed by a contact poison goes through the epicuticula as described at the beginning of this paper. Thus the epicuticula which is the water-repelling lipid layer now takes over the unhappy task of absorbing substances which are easily lipid-soluble and bringing these into close contact with the chitincuticula (extraction). The active ingredient of "Gesarol" and "Neocid," i.e., the 4,4'-dichlorodiphenyl - trichloro - methyl - methane (DDT) has already served us as a model. The trichloro-methyl group, in this case is the lipid-soluble component and the remainder of the molecule, the "condensed" chlorobenzene system, is the poison."

"We started our discussions with vulpinic acid and the unsaturated lactones derived therefrom. The unsaturated lactone rings occur most frequently in natural products which act as insecticides.

"According to the investigations into the effects of the closed and open lactone rings as stomach poisons

which were discussed previously, it is quite obvious that the unsaturated lactone exerts the specific toxic effect. These toxic components correspond to the "condensed" chlorobenzene system of dichloro-diphenyl-trichloro-methyl-methane (DDT). It is most astonishing that the toxic component, whether contained in the natural product or in the synthetic substance, invariably represents a non-ionized, electro-negative, atomic group. This characterizes the toxic components, but of still greater interest is the question as to which groups Nature uses to produce lipid-solubility."

A short discussion of the coumarin fish and insect poisons follows and then they go on to say:—

"Of still greater interest, however, is the study of the exceedingly effective contact poisons known in the trade as rotenone and pyrethrins. Referring to rotenone let us imagine that it is possible to cut open the hydrogenated benzopyran and furan nuclei. We may find in this way that the methoxy groups and the unsaturated isopropenyl group, which due to its unsaturated state has strong lipid affinity, attain a tremendous accumulation and at the same time a concentration of the components which are stored in the lipoids. The gamma lactone ring is obviously the toxic component. (Xanthone is a good stomach poison). Here, so to speak, the lipid soluble components embrace the toxic gamma lactone ring.

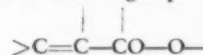
"We were surprised to note that in the part of the pyrethrins which contain chrysanthemum acid, the cyclopropane derivative is found again in a different form. It appears certain that the cyclopropane ring, as well as the methyl and especially the dimethyl ethylene and the allene groups, impart to these substances their high lipid accumulative properties and thereby permit the toxic components to become so active. The ester bond between the cyclopropane and the pyrethrolon molecules might also support this action. The question of the toxic components in the pyrethrins cannot be answered in such a simple manner, but here also,

the previously described grouping

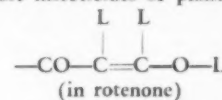
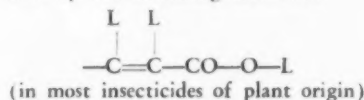
$\begin{array}{c} | \\ -C-C=CO-O- \end{array}$  is of importance inasmuch as a cyclopropane ring of the chrysanthemum-acid acts as a strongly unsaturated group and the bond may be conceived as a double bond."

Here they give the the graphical formulae and go on to say:

"The atomic group



which is responsible for the insecticidal effectiveness can therefore be generalized in accordance with the remarks on the insecticides found in Nature by the following formulae:



"In this connection L=lipid-soluble components and can be in an open-chain or cyclic form, or placed over the  $-C=C-$  double bond. The two L's connected with the double bond may be substituted by hydrogen in part or entirely. The formulae show very clearly how Nature brings about this accumulation of lipid-soluble components in pyrethrins and rotenone and their related products. This reference in all probability will make further explanation unnecessary.

"As we have seen, the pharmacological experiment indicates a typical effect on the nerves by dichlorodiphenyl-trichloro-methyl-methane and all its related products, not only in insects but also in veterbrates. Chemical research has confirmed this interpretation in its own way. Here biology and chemistry again clasp hands in close collaboration. The reason why the compounds of the Gesarol - Neocid groups in the forms applied in practical operation have no toxic effect on warm-blooded animals, is due, in particular, to the absolutely different resorption conditions. This immediately becomes apparent to the physiologist in view of the effects on the insects described, and this causes us

(Turn to Page 147)



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# DDT INSECTICIDES RUSHED ON MARKET

**W**ITH the release of DDT from controls by WPB and the almost simultaneous ending of fighting in the Pacific, a mad scramble to place DDT insecticides on the market got under way late in August. Demand for DDT combinations, that is 25 and 50 per cent solutions and powders, swamped processors. Prime DDT manufacturers likewise were snowed under by the sudden demand. Requests for information on compounding, labeling and restrictions came from all sections of the country. Rumors and reports flew thick and fast throughout the trade. Pennsylvania was reputed to have banned the sale of all DDT products, —later denied from Harrisburg, —Minnesota banned their sale, New Jersey held that they could be sold through registered pharmacists only, implying they are poisons, St. Louis officials termed DDT poisonous, New York City considered classifying them as poisons and requiring the necessary labeling, a special DDT meeting of officials of the Insecticide Division, USDA, U. S. Public Health Service, Food and Drug Administration, trade associations and industry was held in Washington.

From out of the chaotic scramble to get on the market, there came numerous newspaper advertisements of DDT products and window and counter displays in stores. There also came a news release from the U. S. Public Health Service telling householders how to make their own DDT liquid from "a dollar's worth of DDT, a quarter's worth of kerosene, and a soapy emulsifier." The latter in turn brought the threat of Congressional action by NAIDM unless it were retracted by USPHS. Insecticide Division of USDA under whose jurisdiction

Because of the tremendous current interest in DDT—recently released by WPB for civilian use—this specially printed section is added to the current issue of SOAP to give readers the latest available information.

comes enforcement of the U. S. Insecticide Act issued advice on labeling to aid manufacturers in avoiding violations of the Act, and also offered to advise manufacturers on their labels, —without however giving any definite approval,—if they would submit them. NAIDM, AIFA, and the National Pest Control Association issued lengthy bulletins to their members giving label information, warnings, and opinions on danger in use. The Bureau of Entomology and Plant Quarantine of USDA issued a 10 page mimeographed bulletin on "Suggestions Regarding the Use of DDT by Civilians" covering uses against almost all types of common insects and containing a summary of some results from extensive USDA research over the past 2½ years.

In the midst of what has been the most hectic month in the insecticide industry in the last 25 years, there were various side developments of interest. Du Pont announced a new type woodwork finish containing DDT. A New Jersey company, one week old, was restrained by OPA from marketing its new DDT insecticide until it proved by records how it had determined its ceiling price for the new product. One company which is reputed to have sold in one week in August over a million quart cans of its new DDT spray to several large syndicate and department stores, had

to revise its retail price downward from \$1.49 to 49c per quart upon orders from OPA. The latter price was stated to be that of its regular insect spray previously marketed. Most of the new DDT products brought quickly on the market were noted to be those chiefly of smaller manufacturers. Several larger firms came out with their new products, however, early this month. As yet most of the nationally-known insecticide brands have not come out with a DDT product. Several of the largest companies have expressed the intention of awaiting developments before they enter the field, obviously fearing the complications of possible damage suits.

## Poison Label for DDT?

**C**ONFUSION in the insecticide industry is wide on the question of a need for a poison label on DDT preparations. Much conflicting information has been issued on this subject during recent weeks. Based on the suggested labeling from the Insecticide Division of USDA, a poison label including the skull and crossbones is not necessary. However, some states which classify DDT preparations as poisonous, if the sale of these products is not banned, would naturally require a poison label. Before this situation is fully clarified, several weeks will be required. As it stands now, some states and cities have taken sharp restrictive action chiefly as protective measures until they obtain further authentic information on the toxic character of various DDT combinations.

Latest data from U. S. Government officials might be interpreted that DDT preparations, that is in the diluted form in which they are to be

commonly used, are not as dangerous to humans as at first was believed. This would seem to be borne out by the latest Neal (USPHS) report in which a group of government researchers working with DDT in all forms and without any unusual protective measures for fourteen weeks showed no apparent bad effects as might be indicated by careful medical examination at the termination of the period.

The labeling for DDT preparations suggested by Dr. W. G. Reed, Chief, and Dr. E. L. Griffin of the Insecticide Division, USDA, both with wide experience in public health protection, does not call for a poison label but for a less drastic "caution" label. This, it is held among some insecticide manufacturers, is significant of those officials who have much of the latest toxicological research data at their command which, it is pointed out, is not true of most state health officials who are at present "playing it safe." S. A. Rohwer of the Bureau of Entomology & Plant Quarantine, USDA, who likewise has been very close to the DDT picture since its beginning, states that although DDT is toxic if eaten in considerable amounts, it is less toxic than lead or fluorine compounds. Although he recommended caution to insecticide manufacturers when DDT was first released by WPB, he has not, as far as can be determined, indicated the need of a poison label on its preparations as commonly used.

Eventually, various states and cities will probably follow the lead of the federal government as far as DDT poison labels are concerned. However, in the meantime, manufacturers selling in a number of states will of necessity have to obtain the latest ruling of each state before determining upon the use of a poison label. Admittedly, the use of the skull and cross-bones is objectionable and will interfere with the use of the product to some extent. However, it is conceded as a necessary protection of themselves by some manufacturers until clear cut regulations have been issued in all cases.

#### Labeling DDT Preparations

**I**N labeling DDT preparations, the Insecticide Division of USDA which is in charge of federal Insecticide Act

enforcement, has made suggestions which should guide insecticide manufacturers in labeling their products. In view of the fact, says the Division, that many DDT insecticide compositions will be of such a nature that it will not be possible to determine by chemical analysis what setting point the original DDT content had, the Division will not insist on an ingredient statement beyond the following:

Active Ingredients	
Dichloro diphenyl trichloroethane..%	
Inert Ingredients .....	%
Total .....	100%

However, technical grade of DDT suitable for insecticide uses should have a setting point (temperature at which melted DDT solidifies) of 89 deg. C. or higher. This is supposed to indicate a DDT product composed of at least 75 per cent of the para-para isomer (the one which reputedly is the best killing agent and has the longest residual effect) and 25 per cent of the ortho-para and other isomers of dichloro diphenyl trichloroethane. If the setting point is less than 89 deg. C., this is supposed to indicate less than 75 per cent of the important para-para isomer. (An isomer is a different form or molecular arrangement of the same product. Actually there are 27 isomers of dichloro diphenyl trichloroethane, but only two of them are important thus far as insecticides.)

Accordingly for those who choose, the Insecticide Division states that the following label, of course where facts are correctly given, is suitable:

Active Ingredients	
Dichloro diphenyl trichloroethane..%	
(DDT—setting point 89 C. minimum)	
Inert Ingredients .....	%
Total .....	100%

#### Suggested Caution Labels

**R**ECOMMENDED caution labels resulting from a conference in Washington of representatives of NAIDM, AIFA, and the Manufacturing Chemists Association with the following representatives of the Government, Dr. Paul A. Neal, USPHS; Dr. Herbert O. Calvery, FDA; Dr. W. G. Reed and Dr. E. L. Griffin, Insecticide Div., USDA, are as follows:

#### CAUTION LABELS for (1) DDT and (2) FORMULATIONS DDT

Dichloro - diphenyl - trichloroethane, Technical Setting Point 89° C. minimum

**CAUTION:** DDT is toxic and when in solution can be absorbed through the skin. Avoid inhaling dusts, and mist from spray. Avoid contamination of foodstuffs.

#### SOLUTIONS\*

Petroleum Oil Solutions, containing not more than 25 per cent DDT Technical

**CAUTION:** This solution if brought into repeated or prolonged contact with skin can cause toxic symptoms. Avoid excessive inhalation and skin contact.

In case of spillage on the skin wash with soap and water.

Avoid contamination of foodstuffs.

Do not use on household pets or humans.

\* If the solution contains other hazardous ingredients or solvents, appropriate additional cautions must be added to the foregoing.

Emulsions containing not more than 25 per cent DDT Technical

Same as above.

Petroleum Oil Solutions containing more than 25 per cent DDT Technical.

**CAUTION:** This solution if brought into contact with skin can cause caustic symptoms.

Avoid inhalation and skin contact.

In case of spillage on the skin wash immediately with soap and water.

Avoid contamination of food stuffs.

Do not use on household pets or humans.

Emulsions containing more than 25 per cent DDT Technical

Same as above.

For Combustible Mixtures

#### ADD

**CAUTION:** Do not spray into or near fire or open flame.

Do not smoke while spraying.

#### DUST AND POWDER FORMULATIONS

**CAUTION:** Avoid excessive inhalation. Avoid contamination of foodstuffs.

#### COLORATION OR DISCOLORATION:

It was the opinion of the toxicologists that white household powders and dusts should be colored. This recommendation for coloration is solely for the protection of human life but does not conclude that the product is highly toxic to man to the extent that it requires a poison label with skull and crossbones.

The following is the statement of the Insecticide Division regarding submission of DDT labels:

"Since DDT is now being released for civilian uses, many insecticide manufacturers are rushing to get products containing it on the market. They should bear in mind that insecticides shipped in interstate commerce are subject to the Federal Insecticide Act which requires that the labels must not be false or misleading and that in some cases they must bear ingredient statements. To avoid making faulty statements which may later have to be changed, or which may even result

in legal action, manufacturers are urged to submit copies of their proposed labels (which may be in rough draft form), together with the formulas of their products, to this Division for an opinion as to their legal status. The address is: INSECTICIDE DIVISION, LIVESTOCK and MEATS BRANCH, O.M.S., UNITED STATES DEPARTMENT OF AGRICULTURE, WASHINGTON 25, D. C.

"The Division stands ready to give advice to manufacturers who voluntarily submit their labels but it has no authority to approve labels. It is believed that this service will prevent many violations. Published statements about DDT have led to some false ideas as to its effectiveness. Proposed labels which we have seen have made numerous broad claims which were unwarranted. The term DDT has been

used in the name—as, for example, 'DDT Roach Powder'—implying that the product consisted entirely of DDT when only 10 per cent of DDT was present; and insufficient directions for use have been given. In some cases needed cautions have been omitted from the labels. It is to prevent known misbranding that the submission of proposed labels is suggested.

"The Insecticide Division cannot test products for manufacturers nor can it pass on claims for new and untried uses. If the product is intended for such uses the manufacturer should first have it thoroughly tested by competent experts to make sure that it is safe and effective for the uses intended.

W. G. REED, Chief  
Insecticide Division  
LIVESTOCK AND  
MEATS BRANCH.



### OPA Cites DDT Seller

DDT Products Co., 140 Astor St., Newark, N. J., a firm which had been in business for only one week, was cited recently by OPA in a complaint filed in Federal Court at Newark asking a restraining order from selling DDT insecticide preparations until it has prepared records showing how it established prices. As pointed out by OPA, new manufacturers must apply to OPA for a price if they have no basis of price comparison as of March, 1942. The OPA office which filed the New Jersey complaint asked local marketers of the new DDT products to check with that office in Newark on proper ceiling prices.

### Big DDT Program for Greece

The United Nations Relief and Rehabilitation Administration will shortly start a drive against malaria in Greece by putting into service ten specially built planes which will be used for spraying DDT. Dr. J. B. Kirk, UNRRA's chief medical officer in Greece, is authority for the statement that there are approximately three million sufferers from malaria in Greece at the present time.

### DDT Kills Fish in N. J. Test

The Essex County Mosquito Extermination Commission and the N. J. State Agricultural Experiment Station have sprayed a number of New Jersey areas with DDT over the course of the past month in a drive against

the worst mosquito infestation in years. Among reports on the operations were some calling results excellent. Numerous localities reported, however, that fish were being killed in substantial number as well as mosquitoes. Still other reports from Jerseyites indicated that there were still plenty of live and hungry mosquitoes.

### DDT Sale in Penna.

On the eve of the day DDT was to be made available for general sale by the War Production Board ruling, the State Agricultural District of Pennsylvania announced from Harrisburg that DDT may not be sold to the public in Pennsylvania. The reason for this announcement, according to State Secretary Miles Horst, was that except for limited experimental purposes, no DDT preparations for general civilian use had been registered with the Bureau of Food and Chemistry under the law designed to protect the public from fraud and deception.

### Pennsalt Studies DDT as Mothicide

With the release of DDT for civilian uses, Pennsylvania Salt Manufacturing Co., Philadelphia, one of the producers of DDT, has announced that research is now going on in the firm's Whitmarsh Research Laboratories to find new combinations and uses for DDT. One of the combinations being investigated is a practical and economical method for moth-proofing clothes. Because of the potency of

DDT, the Pennsalt release states, the amount of useful DDT to reach the market will be greater in pounds per month than the WPB order indicates.

### Tells DDT Pricing Methods

Methods of determining maximum prices for DDT and DDT formulations, which are subject to price control regulations, were given in a bulletin dated Aug. 6, and distributed by the National Association of Insecticide and Disinfectant Manufacturers, New York. In its bulletin, the Association quotes an opinion given by C. G. Gran, head of the Agricultural Chemicals Section, Food Price Division of the OPA, Washington. In general, DDT price ceilings are set at the highest price charged by the seller for a similar commodity for which a maximum price has been fixed. In the case of a seller not making a comparable product, his DDT insecticide ceiling price would be that of "the most closely competitive seller of the same class" for the same product or for a similar product most nearly like it. Ceiling prices determined under Section 1499.2 (GMPR) need not be submitted to OPA for approval but those covered by 1499.3 (b) (2) of GMPR must be submitted to OPA for approval.

### St. Louis DDT Warning

The Department of Public Welfare of the City of St. Louis recently issued a warning on the use of DDT. In the warning, the department said that DDT is poisonous and that its effects on plants, animals and humans are not fully known. It points out, "DDT is known to be poisonous if taken into the body in sufficient quantities and its effects on the body are cumulative. Continued exposure to DDT, particularly its solution, may be injurious or fatal. Skin contact with its solutions should be avoided. The material should not be sprayed on small animals or on birds, or on food or food contact surfaces or containers. Some plants are damaged by it and it should not be used on vegetables or fruit until cleared by the Federal Department of Agriculture for such use."





DDT inventors, representatives of J. R. Geigy, S. A., Basle, Switzerland, who recently concluded a two months' stay in the United States, Dr. Paul Lauger, Dr. Robert Wiesmann and Dr. Paul Muller.

## DDT Inventors Visit U. S.

**A** GROUP of Swiss scientists from J. R. Geigy, S. A. of Basle, who were responsible for the development of DDT insecticides, have recently completed a two months' stay in the United States during the course of which they participated in a series of conferences with government and Army authorities and others interested in current programs for the use of DDT. Because of governmental sponsorship for the trip, their arrival July 9th had not been previously announced, and their time had been reserved for official appearances. The organizations included in the conferences with the Geigy delegation were the Army Committee for Insect and Rodent Control, the U. S. Department of Agriculture, the U. S. Public Health Service, the Tennessee Valley Authority, the Fish and Wild Life Commission, the National Research Council as well as private laboratories interested in the development of DDT Insecticides.

The group consists of Dr. Paul Lauger, director of research of J. R. Geigy, S. A. of Basle, who several months ago received from the University of Basle the honorary degree of Doctor of Medicine for his direction of the Geigy laboratory research that developed "Gesarol," "Neocid" and other DDT compositions; Dr. Paul Muller of J. R. Geigy, S. A., who was associated with him in this work and who was the inventor of DDT insecticides; Dr. Robert Wies-

mann who, as entomologist of the Federal Agricultural Experiment Station at Waedenswil, Switzerland, published the first important papers on the effectiveness of DDT insecticides (Gesarol) and who is now the chief entomologist of J. R. Geigy, S. A.

The Swiss Scientists began their conferences in Washington on July 17th. After their conferences in Washington visits were made to the various laboratories and experimental stations of these governmental departments. This phase of the visit was brought to a close with a series of lectures given by the Swiss scientists

at the National Academy of Science at Washington, D. C. on July 31, 1945.

Dr. Paul Lauger spoke on "The Mechanism of Intoxication of DDT Insecticides in Warm-blooded Animals and Insects." This paper will be published shortly. Dr. Paul Muller read a paper on how he discovered the insecticidal qualities of DDT and how he invented the first successful compositions containing DDT. Dr. R. Wiesmann's paper dealt with the way DDT enters the insect body, and is an important contribution to DDT research, considering the contact properties of this new insecticide.

The itinerary worked out by the Army Committee on Insect and Rodent Control of the Surgeon General's Office then called for trips to various government stations located at Beltsville, Maryland, Savannah, Georgia and Orlando, Florida, and also to the malaria control stations of Tennessee Valley Authority. The program was terminated on August 17th, and the group were scheduled to fly back to Basle later in the month.

## Drop Pyrethrum Controls

**A**LL end use controls on pyrethrum were removed effective August 21, and by the end of September it is expected that Allocation Order M-300, Schedule 48, dealing with pyrethrum, will have been revoked. Recent sharp cutbacks in Army procurement of aerosols have made large quantities of high grade pyrethrum available for civilian use. No similar announcement has been made as yet with reference to rotenone, although end use controls are not being applied and it is believed that Schedule 49 of M-300, controlling rotenone, may also be revoked September

30. DDT, copper and thallium chemicals have all been taken off allocation in company with many other chemicals used by insecticide manufacturers, following the sudden end to the war. Most container restrictions will also disappear by the end of September, it is reported, although M-81, restricting use of tin containers, will probably be retained until the supply situation on tin improves. It is reported that the Insecticide Unit, Chemicals Bureau of WPB, will shortly be disbanded, its reduced functions to be taken over by some other unit.



## As We Go To Press

# DDT Labeling Instructions

## Issued by Insecticide Division

THE term "DDT" refers to the compound 2,2-bis(parachlorophenyl)-1,1,1-trichloroethane, including both the technical grade of this material, minimum setting point 88° C. and the purified grade. Technical DDT, which is the form of this chemical used for most insecticidal purposes except aerosols, consists primarily of 2,2-bis(parachlorophenyl)-1,1,1-trichloroethane, together with impurities, including considerable amounts of isomers and much smaller amounts of other by-products formed in its manufacture.

When DDT is used as an insecticide, it is mixed or compounded with other materials to make it suitable for application. The forms commonly used are solutions in kerosene, deodorized kerosene, or other mineral oil, to which other insecticides may be added; emulsifiable materials consisting of DDT in an oil solvent, together with an emulsifier, so that emulsions will be formed when they are mixed with water; powders (which may be used as dusts, sprays, or paints) consisting of DDT in an inert carrier, such as pyrophyllite, talc, or clay, and the so-called aerosols, consisting of a propellant such as Freon, DDT, and possibly other insecticides.

### Ingredient Statement

Under Section 8 of the Federal Insecticide Act, any insecticide which contains an inert ingredient—that is, one which is not in itself an insecticide—must bear on its label a plain and correct statement of the name and percentage amount of each inert ingredient or, in lieu of this, a plain and correct statement of the name and percentage amount of each of the active ingredients, together with the total percentage of inert ingredients. If the product consists entirely of active ingredients, no ingredient statement is required.

As far as we are now aware, the normal impurities in technical DDT are all active ingredients within the meaning of the act. Mineral oil, such as kerosene, is also an active ingredient for use as a contact insecticide against the common household insects. Therefore, in general, technical DDT and kerosene solutions of DDT are not required to bear an ingredient statement on their labels. No objection is, however, raised to such a statement as "Active Ingredients 100 Per Cent."

The emulsifiable products may or may not consist entirely of active ingredients, depending upon the solvent and upon the emulsifier used. If both the solvent and the emulsifier are ac-

tive and the preparation contains no other ingredient, no ingredient statement is required on the label. On the other hand, if the preparation contains an inert ingredient—for example, if the emulsifier is inert or if there is water present—the label must bear an ingredient statement. The carrier in the powders is usually inert and, therefore, the labels for the powders must also bear an ingredient statement.

There is at the present time no practical method for determining all of the different compounds in technical DDT. In view of this, no objection is raised to considering dichloro diphenyl trichloroethane (which includes 2,2-bis(parachlorophenyl)-1,1,1-trichloroethane and its isomers) as an active ingredient. For an insecticide containing technical DDT as its only active constituent, either of the following forms of ingredient statement, which should appear prominently on the front panel of the label, will be acceptable:

### ACTIVE INGREDIENT

Dichloro diphenyl trichloroethane	.....%
-----------------------------------	--------

### INERT INGREDIENTS

Total	100%
-------	------

or

(assuming that the technical DDT has a minimum setting point of 88° C.)

### ACTIVE INGREDIENT

Dichloro diphenyl trichloroethane	.....%
(DDT—setting point 88° C. minimum)	.....%

### INERT INGREDIENTS

Total	100%
-------	------

the correct values to be inserted in the blank spaces. If other active ingredients are present, the ingredient statement in either case should be changed to show the name and percentage of each of them under the heading "ACTIVE INGREDIENTS."

### Efficacy Claims

Insecticides containing DDT are known to be effective against a wide variety of insects but they are not effective against all insects and they are different in their action from some of the common household insecticides. Their labels should clearly state the purposes for which they are intended and give clear and adequate directions for use. When necessary, the

dosages should be definitely specified. Since different household insects have different habits, the same directions will not be suitable for all uses. The following paragraphs indicate types of directions which will be acceptable.

**Flies, Mosquitoes, and Gnats.**—As little as 1 per cent of DDT in kerosene is eventually effective as a spray for these insects but it is very slow in action. Because of this sluggish action, products consisting of DDT in kerosene cannot be classified as to grade by the Peet-Grady method. Some other toxicant must be added if quick knockdown is desired. The directions for use should provide for closing all doors and windows and thoroughly spraying the product in all parts of the room, particularly toward the ceiling so as to fill the room with a fine mist. The room should be left closed for 10 or 15 minutes after spraying. No claims for lasting or residual effects should be made for such a treatment.

Insecticides containing DDT can also be used for residual effect. A dosage of 200 milligrams of DDT per square foot will give residual effect up to 3 or 4 months unless removed by weathering, washing, or other means. To obtain such a deposit without runoff, it is usually considered necessary to apply a 5 per cent concentration in oil or water. The directions should provide for thoroughly treating screens, walls, painted woodwork, light fixtures, and other places where the insects may alight. For flies and other insects attracted to light, it is most important to cover the spaces toward the light. Since some kinds of mosquitoes seek dark places, directions should provide for treating these hiding places. Screens are subject to weathering and, therefore, directions should provide for re-treating them at frequent intervals.

**Bedbugs.**—Sufficient DDT in the form of an oil solution, as a dust, or in an emulsion will be effective as a contact or as a residual poison for bedbugs. The directions should provide for thoroughly treating bedsteads and mattresses, paying particular attention to all hiding places. If a good treatment is given and the residue is left in place, it may be effective for as long as six months.

**Fleas Infesting Premises.**—Dusts and oil sprays containing DDT in suitable amounts have been found effective against fleas. Directions should provide for thoroughly spraying or dusting floors, rugs, and other flea-infested places. Under ordinary conditions where the residue is not removed, residual action for several weeks may be expected.

**Ants in Buildings.**—Oil solutions containing DDT should be sprayed so as to hit as many of the ants as possible and to thoroughly wet their runways and the other places which they frequent. Such treatment should give a residual effect for periods up to several weeks.

Dusts containing DDT have shown value against certain species of ants. They should be recommended for use so as to hit as many ants as possible and to cover their runways and the places they frequent. If a dust is not

effective against all sorts of ants infesting households, this should be made clear.

**Roaches.**—Not less than 8 per cent of DDT in a dust, 5 per cent in an oil solution, or 3 per cent in a water spray should be recommended for these insects. The German roach or waterbug is especially difficult to control with insecticides containing DDT. Instructions should provide for treating cracks and crevices in woodwork, dark places behind pipes, and all places which roaches infest, hitting as many insects as possible. A thorough treatment may give protection for several weeks but in view of the difficulty in controlling these insects, instructions should be given for repeating the treatment whenever reinfestation occurs.

**Ticks in Premises** (the brown dog tick which is not known to carry disease).—This tick hides in cracks or crevices of kennels or houses, and directions for use against it should be similar to those for use against roaches. Since the engorged tick is quite resistant, a second treatment may be necessary.

**Clothes Moths and Carpet Beetles.**—The oil sprays containing DDT will kill clothes moths and carpet beetle larvae by contact. Directions for this use should provide for thoroughly spraying the articles to be protected, paying particular attention to folds and seams, as well as spraying the containers in which they are packed. If they are not in tight containers, the treatments should be repeated at monthly intervals.

DDT is also known to have mothproofing properties—that is, residues remaining in the fabric will give lasting effect. Any directions for such use should provide for a thorough contact with the fibers of the articles to be protected. If the DDT will be removed by dry cleaning, by washing, or by other agents, instructions should be included to repeat the treatment after such dry cleaning, washing, or other exposure.

#### CAUTION STATEMENTS

The Federal Insecticide Act does not require poison labels on insecticides. However, it does require that the labeling of such products shall not be misleading and recommendations for use are considered misleading if they will result in injury to persons or animals involved. Since there is a certain hazard in the use of preparations containing DDT, a caution labeling for

them is recommended. The following suggested cautions have been prepared after consultation with authorities on toxicity:

1. *For straight DDT Technical*

CAUTION: DDT is toxic and when in solution can be absorbed through the skin. Avoid inhaling dusts, and mist from spray. Avoid contamination of food-stuffs.

2. *For Petroleum Oil Solutions containing not more than 25 per cent DDT Technical*

CAUTION: This solution if brought into repeated or prolonged contact with skin can cause toxic symptoms. Avoid excessive inhalation and skin contact.

In case of spillage on the skin wash with soap and water. Avoid contamination of food-stuffs.

Do not use on household pets or humans.

3. *For Petroleum Oil Solutions containing more than 25 per cent DDT Technical*

CAUTION: This solution if brought into contact with skin can cause toxic symptoms. Avoid inhalation and skin contact.

In case of spillage on the skin wash immediately with soap and water.

Avoid contamination of food-stuffs.

Do not use on household pets or humans.

4. *For Emulsions containing not more than 25 per cent DDT Technical*

Same as (2) above.

5. *For Emulsions containing more than 25 per cent DDT Technical*

Same as (3) above.

6. *For Combustible Mixtures*

Same as above, and add: CAUTION: Do not spray into or near fire or open flame.

Do not smoke while spraying.

7. *For Dust and Powder Formulations*

CAUTION: Avoid excessive inhalation.

Avoid contamination of food-stuffs.

If the preparation contains other hazardous ingredients or solvents, appropriate additional cautions must be added to the foregoing.

It was the opinion of the toxicologists that the white household pow-

ders and dusts should be colored. This recommendation for coloration is made solely for the protection of human life, but does not conclude that the product is highly toxic to man to the extent that it requires a poison label with skull and crossbones.

#### Statements Concerning DDT Content

In view of the great publicity that has been given DDT, there is a tendency to overemphasize references to DDT on the label, as by using it in the name or by printing it in such large letters as to overshadow other reading matter on the label. Such names as "DDT Spray," "DDT Powder," or "Doe's DDT Insecticide" are not acceptable. It is a general rule of labeling that if a name is to be descriptive, it must be completely descriptive. A product containing 5 per cent of DDT in kerosene is not a "DDT Spray" but is a "Kerosene and DDT Spray." A 10 per cent mixture of DDT in clay would be a "Clay and DDT Powder," rather than a "DDT Powder."

If a preparation contains DDT in sufficient amount to be effective against all of the insects named on the label, no objection is raised to a statement that it "Contains DDT," provided the word "Contains" is in the same sized type and equally as prominent as the term "DDT" and that they are not more prominent than the name of the product.

Some preparations are being made by merely adding DDT in small amounts to another insecticide, the DDT being present in too small an amount to be effective against some or all of the insects named. An unmodified statement that the product contains DDT would give the misleading impression that it contains sufficient DDT to be effective against all of the insects named. To avoid such a misleading impression, the label in this case should definitely state the amount of DDT present, if any reference to it is made,—as, for example, by stating "Contains . . . per cent DDT," the correct value being inserted in the blank space.

#### Other Insecticidal Uses of DDT

Insecticides containing DDT are of value for many agricultural and other insecticidal purposes. Directions for such uses are not discussed in this trade notice because they have not yet been sufficiently developed. There is, of course, no objection to marketing DDT preparations for other uses for which they are known to be effective, provided they are properly labeled.

Issued Sept. 1, 1945, by Insecticide Division, U. S. Department of Agriculture, W. G. Reed, Chief.



## TRADE MARKS GRANTED

(From Page 57)

Wash., Aug. 9, 1944. Serial No. 473,098. Published Apr. 17, 1945. Class 4.

414,744. A chemical preparation in liquid form for cleaning pharmaceutical syringes. Filed by Strasenburgh Co., Rochester, N. Y., Nov. 1, 1944. Serial No. 475,986. Published Apr. 10, 1945. Class 6.

414,748. Rust preventative. Filed by Minuskin Sales Corp., New York, Nov. 4, 1944. Serial No. 476,108. Published Apr. 10, 1945. Class 6.

414,751. Bird repellent. Filed by Destruoxol Corp., Ltd., Pasadena, Calif., Nov. 14, 1944. Serial No. 476,426. Published Apr. 10, 1945. Class 6.

414,756. Insecticides. Filed by The Pennsylvania Salt Manufacturing Co., Philadelphia, Nov. 17, 1944. Serial No. 476,576. Published Apr. 10, 1945. Class 6.

414,783. Insecticides. Filed by Merck & Co., Rahway, N. J., Dec. 27, 1944. Serial No. 477,977. Published Apr. 10, 1945. Class 6.

414,791. Shampoo. Filed by Lanchere, Inc., Chicago, Jan. 4, 1945. Serial No. 478,230. Published Apr. 17, 1945. Class 4.

414,793. Washing and cleaning compound for floors, etc. Filed by Carsello Chemical Products, Chicago, Jan. 8, 1945. Serial No. 478,376. Published Apr. 17, 1945. Class 4.

414,799. Household disinfectant. Filed by The Dill Co., Norristown, Pa., Jan. 13, 1945. Serial No. 478,573. Published Apr. 10, 1945. Class 6.

415,023. Shampoo. Filed by Follene Co., Buffalo, N. Y., Sept. 20, 1944. Serial No. 474,419. Published Apr. 24, 1945. Class 6.

415,033. Liquid Fabric cleaner and spot remover. Filed by Sure-Rite Products Co., Philadelphia, Nov. 10, 1944. Serial No. 476,347. Published Apr. 24, 1945. Class 4.

415,041. Shampoo. Filed by Kay-Evans, Inc., Washington, D. C., Nov. 28, 1944. Serial No. 476,971. Published Mar. 27, 1945. Class 6.

415,044. Skin lotion for treatment of athlete's foot. Filed by Charles S. Ledvin'ta Co., Baltimore, Dec. 1, 1944. Serial No. 477,121. Published May 1, 1945. Class 6.

415,045. Germicide. Filed by The Thiamar Laboratory, McAlester, Okla., Dec. 1, 1944. Serial No. 477,113. Published May 1, 1945. Class 6.

415,075. Furniture polish and wax. Filed by New England Distributors, Manchester, N. H., Jan. 5, 1945. Serial No. 478,269. Published May 1, 1945. Class 16.

415,084. Insect repellent. Filed by Lehn & Fink Products Corp., Bloomfield, N. J., Jan. 12, 1945. Serial No. 478,555. Published Apr. 24, 1945. Class 6.

415,094. Wetting agent. Filed by L. Sonneborn Sons, Inc., New York, Jan. 22, 1945. Serial No. 478,909. Published May 1, 1945. Class 6.

415,103. Termite preventive. Filed by Protection Products Manufacturing Co., Kalamazoo, Mich., Jan. 27, 1945. Serial No. 479,092. Published May 1, 1945. Class 6.

415,293. Silverware cleaner. Filed by Earl Products Co., Chap-paqua, N. Y., Aug. 7, 1943. Serial No. 462,551. Published Feb. 1, 1944. Class 4.

415,294. Auto wash. Filed by Touraine Chemical Co., New York, Sept. 27, 1943. Serial No. 463,715. Published May 15, 1945. Class 4.

415,298. Fumigating compounds and disinfecting chemicals. Filed by Pittsburg Shemical Co., Los Angeles, Nov. 11, 1943. Serial No. 464,926. Published May 8, 1945. Class 6.

## LABELING ERRORS

(From Page 113)

tions such as those here referred to are of no practical value for this purpose.

**A**NOTHER product having a wide sale was naphthalene compressed in the form and size of hens eggs, to be placed in the nests, and bearing claims such as "Keep poultry free from lice and other vermin. . . . Exterminates lice. . . . The friend of the hen. . . . Contains a powerful disinfectant. . . . Keeps disease from poul-

try." Tests showed these "eggs" to be not only ineffective against lice and vermin of poultry but that they were actually injurious to the fowls, and eggs were tainted and rendered inedible if they remained in contact with them for a short time. Many seizures were made, and criminal action cases were brought against the manufacturers of these preparations, as a result of which all such products were driven from the market.

One of the early uses of naphthalene as an insecticide was for the protection of clothing from damage by moths. Paradichlorobenzene came into use later for the same purpose. Both of these chemicals are effective in killing moths, but many other claims were made for them that were not warranted, such as "The most powerful insecticide known . . . kills ants and many other insects and their eggs . . . moth preventative and deodorant, hang in bedroom, bathroom and kitchen . . . to eliminate all insects place tablet over window or door, the heavy gas fumes form a protective screen, which prevents insects entering . . . for kitchen use place on floor of the infested room and note promptness with which vermin disappear . . . kills moths, flies, roaches, mosquitoes and all other insects . . . hang up to disinfect toilets and rooms."

Naphthalene and paradichlorobenzene are worthless as disinfectants. Their principal value in the home is for killing moth larvae, and for this use they act as fumigants and must be applied in containers tight enough to retain the fumes so that a dosage sufficiently toxic to kill the larvae when hatched, and before they have a chance to injure the fabric, will be maintained. They have no repellent action against moths and the mere presence of a solid cake of the material in a closet which is in use and frequently opened is of no value.

**S**PRAYS for stock, to kill or keep off flies, are frequently misbranded. Claims of repellent action over long periods of time and indefinite claims such as, "increases milk production," "will not taint milk," "harmless," "keeps flies off cattle and



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horses," are not justified. Published results of tests with mineral oils of the type frequently used in animal fly sprays have shown that they may cause injury to the animal if applied too freely and may reduce milk production. The repellent action of these oils, in amounts that are free from injury risk, is limited to short periods of time, generally not more than two or three hours for horn flies, and to a more limited extent for stable and house flies. They are of no practical value in repelling bot flies, horse flies or warble flies (heel flies). The chief value of these animal fly sprays would appear to be to quiet the cows during the milking period.

Many preparations for the control of ants have been misbranded. Ants vary in their feeding habits,—some preferring sweets and others fats, (the latter frequently referred to as, "grease eating ants,"),—and the same type of product is not effective against both types. In labeling them the ants for which the preparation is intended should be named, and broad claims such as, "kills ants," or "controls ants," should not be made. Ants also are very discriminating in their tastes and a product made up to a specific formula may be readily eaten, while if the poisonous ingredient is increased even slightly or a change made in the bait, they may avoid it.

In formulating products and preparing label claims, many do not realize that insects vary greatly in resistance, feeding habits and in their environment, and that a chemical which is effective against one species may be harmless against another, or that the dosage or method of application may be a controlling factor. The same treatment is frequently recommended for chicken lice and chicken mites. Chicken lice spend their life cycle on the fowls, rarely leaving their host, while the common chicken mite (red mite) lives and breeds in the cracks and crevices of the poultry house and attacks the fowls only at night to feed. Different methods of treatment are necessary for their control. A recommendation frequently made on chicken lice powders is to mix some of the powder with ashes or

road dust in an open box and place it where the fowls may dust themselves. Such a method is not adequately effective for the control of lice, since the product is too greatly diluted to kill them,—furthermore, some fowls do not dust themselves.

There are also different types of lice of animals, some feed through puncturing of the skin of the animal and sucking its blood, while others have biting mouth parts and feed on the scales of the skin and on the feathers. Due to these differences in feeding habits, different methods are frequently necessary for their control.

Roaches are more resistant and much more difficult to kill than most other household insects and the usual type of spray intended primarily for flies and mosquitoes is not an effective roach spray.

Instead of attempting to make a so-called "all purpose" dust or spray, it would appear to be preferable to formulate a product best suited for a

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#### RODENTICIDES (From Page 119)

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that a marked danger of secondary poisoning to dogs and cats exists in the use of 1080. There is no certain data on the comparative danger to humans, but judging from work with monkeys, it is rather consoling to learn that the probability is that these poisons are less dangerous than thallium, strychnine, and phosphorus. That the new compounds are poisonous must be recognized, however, and that they should be used only by trained personnel is a foregone conclusion.

Reports which have been accumulated from research studies with 1080 and ANTU, indicate that there is still a great deal to be learned about these two materials. New methods of use must be studied in order that the favorable characteristics of the poisons may be exploited, while the disadvantages are being minimized. The example shown by DDT should indicate the length of the testing periods needed before the answers are available as to how these new poisons may best be used to insure reasonable safety to the operator and the general public. Rodent control specialists should be in-

particular purpose and to limit the claims for it to such uses.

No product has ever received the extensive publicity and advertising that DDT has received during the short time since its possibilities as an insecticide were first discovered. Tests with it have shown it to be highly toxic to a great number of insects and it is undoubtedly a valuable addition to our list of insecticidal materials. But the prediction that has been made that the discovery of DDT will lead to the gardener's "promised land" is too optimistic. Its recent release to a limited extent for civilian use will result no doubt in quite a scramble by manufacturers to utilize it in their products, which will create many new labeling problems. Until more exhaustive tests have been made of its insecticidal properties and other factors that enter into its general use by the public, it will be well to exercise some restraint in making claims for it.

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terested in the release of these two new agents, but should not become too optimistic about that happening overnight, nor too insistent that widespread use be instituted immediately. No specific antidotes are known either for 1080 or ANTU, which in itself will dictate that the substances be used with the utmost caution.

It is safe to prophesy that the urgency of war research has hastened the discovery of two new agents of value to man's eternal fight against the noxious rodents which compete with him for food; which carry diseases transmissible to him; which destroy or undermine his buildings, cut his electrical insulation, damage his plumbing or bite his children. These poisons will not prove to be panaceas, but will be of great importance where a rotation of chemicals is essential to obtain effective control. The scope of the testing program now underway guarantees that both ANTU and 1080 will be added to the list of specialized rodent control agents in the near future. It is hoped that they will always be used wisely and carefully with proper consideration for the hazards which they possess.

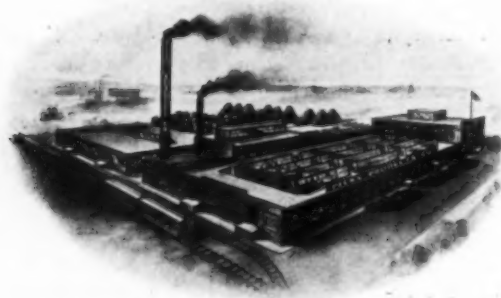
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## Analogs of DDT

Several alkoxy analogs of DDT were synthesized and tested against houseflies by the large group Peet-Grady method, with "Deo-Base" used as the solvent for making the spray solutions. With DDT at a concentration of 0.25 gram per 100 ml. the knock-down in 10 minutes was very poor, but most of the flies knocked down were dead in 24 hours. Slow knock-down is one of the recognized shortcomings of DDT.

The methoxy analog, 2,2-di-para-anisyl-1,1,1-trichloroethane, showed a surprisingly good knock-down. With the use of 0.15 gram per 100 ml. it was not quite up to the required standard, but with 0.2 gram per 100 ml. it was very satisfactory. These lower concentrations gave poor kills, but 0.4 gram per 100 ml. gave a good kill.

The ethoxy analog, with phenetyl in place of anisyl in the methoxy compound at a concentration of 0.2 gram per 100 ml. gave a good kill and a knock-down distinctly better than that given by DDT although not as good as that given by the methoxy analog. In order to compare the ethoxy analog with DDT more adequately, pyrethrum extract was added to the spray solutions to provide a satisfactory knock-down. The results of these runs show that the ethoxy analog may be at least two-thirds as effective as DDT against flies. By adding 0.15 gram of the methoxy analog per 100 ml. of the solutions of these compounds to provide the knock-down, this relative effectiveness was again attained.

DDT, the methoxy and the ethoxy analogs were found to be about equally effective against mosquito larvae. Concentrations of 0.03-0.04 parts per million in tap water killed half of the larvae in 20 hours.

Preliminary feeding tests were conducted to determine the comparative toxicity to white rats of the ethoxy analog and DDT, since the latter substance is known to be toxic to higher animals, and the ethoxy compound has shown excellent insecticidal activity. Four animals were used for each compound. The test compound in each case was uniformly distributed in the mixture at a level of 0.2 per cent. All of the rats receiving DDT soon developed severe tremors and died within 8-10 days. The female rats receiving the ethoxy analog developed tremors somewhat later and died, one after 15 and the other after 21 days. The males receiving the ethoxy analog were still apparently normal after four weeks. The results suggest that the ethoxy analog may be less toxic than DDT to higher animals. E. A. Prill, A. Hartzell and J. M. Arthur. *Science* 101, May 4, 1945.

## Control of Larvae on Cattle

Control of *Hypoderma lineata* and *H. bovis* larvae in the backs of beef and dairy cattle was obtained with a spray containing 10 pounds of derris, 10 pounds of wettable sulfur, and 1 pint of detergent in 100 gallons of water, applied at 250-300 pounds pressure. For hand application with a brush, the mixture should contain 12 ounces of derris per gallon. A dust containing equal parts by weight of

wettable sulfur of 325 mesh, and derris of 200 mesh, applied by hand, was effective only against 5th stage larvae. M. A. Stewart. *J. Econ. Entomol.* 37, 756-60.

## Stable Rotenone Dispersion

To prepare a stable rotenone insecticidal product, dissolve 20 pounds of caustic potash in 480 pounds of water, add this solution to 100 pounds of a higher fatty acid and heat until a clear completely saponified product is obtained. Next dissolve 58 pounds of tetrapotassium pyrophosphate in 58 pounds of water and add this to the soap with constant stirring until a smooth jelly-like product is obtained. To this add with high-speed mixing 120 pounds of a mixture of 6 per cent of rotenone, 14 of derris extract, 20 of derivatives of naphthylcyclohexylamine, and 60 per cent by weight of solvent. The final composition can be diluted with soft or hard water. F. H. Kellner and R. R. Williams. U. S. Patent No. 2,358,073.

## Fungicide in Leather

In Canada experiments were made in the tanning industry to introduce a disinfectant into the fat liquor during the tanning process. Of eleven compounds tested, phenyl mercuric acetate was the most effective in preventing the growth of fungi and mold. The concentration in the leather was so small that it would not affect the feet of those who subsequently wore shoes made of such leather. *Manufacturing Chemist* 16, 145 (1945).

## Theory of Probits

Many insect toxicologists have used the probit transformation for analyzing dosage-mortality data. Most dosage-mortality or time-mortality curves derived from the action of poisons are linear or made up of two linear segments when dosage or time units are transformed to logarithms. Since the probit scale approaches 0 and 100 per cent asymptotically, some toxicologists have hesitated to apply the probit-log transformation to mortalities higher than 99 per cent. Rigid application of the probit transformation does not lead to hypothetical impossibilities at high mortality. Nonlinear

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probit-log curves do not necessarily disprove the usefulness of probits; they may indicate some difference in the mode of toxic action. D. F. Starr. *J. Econ. Entomol.* 47, 850.

#### Gas Condensate

A gas condensate which is a by-product in the manufacture of gas for cooking and heating, is available as a light fraction with a viscosity like a fuel oil, and a heavy coal-tar fraction. The light fraction mixed with fuel oil No. 2, or a mixture of the light and heavy fractions are useful insecticides for the immature stages of the stablefly and the housefly in certain types of decaying vegetable matter. The insecticide may be applied with a sprayer or sprinkling can. Gas condensate is suggested for use in some operations for mosquito and sand-fly control. S. W. Simmons and W. E. Dove. *J. Econ. Entomol.* 38, 23-5.

#### Nicotine Cyanide for Roaches

Cuprous nicotine cyanide killed all the large nymphs of the American cockroach in 3 days. A number of new metal-nicotine compounds are effective insecticides. E. L. Mayer, J. B. Gahan, and C. R. Smith. U. S. Dept. Agr., Bur. Entomol. Plant Quarantine E-646, 14 pp. (1945).

#### Pyrethrum Activator

Addition of 2.5-5 per cent of terpin diacetate to a petroleum distillate fly spray containing 100 milligrams of pyrethrins per 100 cc. increased the effectiveness of the spray against houseflies. All preparations showed the quick-acting toxicity of pyrethrum. R. L. Pierpont. *J. Econ. Entomol.* 38, 123-4 (1945).

#### Fumigant for Dairy Factories

In practical tests methyl bromide gave excellent control of cockroaches, cheese skippers, cheese mites, rats, mice and other minor pests of dairy plants and cold-storage warehouses. The fumigant had no adverse effects on dairy products or factory equipment. E. M. Searls, F. W. Fletcher, and E. E. Kenaga. *J. Econ. Entomol.* 37, 822-9.

#### Army Plans Extensive DDT Tests

The Army announced recently that extensive investigations are now being carried out to determine the usefulness and possible hazards in a large scale use of DDT as part of a plan to guard against the spread of malaria by troops returning from overseas. In a joint statement of policy by the U. S. Army and the U. S. Public Health Service the following plans for using DDT were outlined: "DDT will be used for residual spray application to houses and other buildings for the purpose of killing adult mosquitoes before they have an opportunity to transmit malaria. The long lasting killing effect of DDT as a residual spray provides a highly effective means to prevent the spread of the malarial parasite. The use of DDT as a mosquito larvicide will be limited to experimental investigations and to situations where DDT has a definite advantage over other larvicides in saving materials and manpower, and where it presents no hazard to fish and other wildlife. Distribution of DDT from aircraft for large scale area control of mosquitoes in military and adjacent areas in the United States will be limited to projects conducted with due regard to the possible effects of DDT on beneficial insects and all forms of plant and animal life and in accordance with safeguards established by the Surgeon General of the Army and the U. S. Public Health Service."

#### Rotenone for Cattle Grubs

The most effective dust for control of cattle grubs consists of ground cube or derris 1 part, plus double-ground cream tripoli earth 2 parts by weight, containing at least 1.5 per cent of rotenone. Mixtures with micronized volcanic ash or pyrophyllite (90 per cent through a 325-mesh screen) are somewhat less effective.

A high degree of control of the grubs is obtained by means of a spray containing 7.5 pounds of cube or derris powder (5 per cent rotenone) per 100 gallons of water, applied to the backs of the animals at 400-410 pound nozzle pressure. With a pressure of 400 pounds or more, sprays

containing cube powder and either wettable sulfur or a wetting agent are less effective than those containing only cube powder. A satisfactory wash is composed of ground cube or derris 12 ounces, and granular laundry soap 4 ounces per gallon of warm water. A suitable dip contains ground cube or derris 10 pounds, and wetting agent such as sodium lauryl sulfate 2 ounces per 100 gallons of water. U. S. Dept. Agr., Bur. Entomol. Plant Quarantine E-623.

#### Piperic Acid Derivatives

Many esters and substituted amides of piperic acid are toxic to adult *Musca domestica*. In Peet-Grady tests the amides derived from primary and secondary alkyl amines containing 3-7 carbon atoms, and the esters derived from alcohols with more than 3 but less than 7 carbon atoms were the most toxic. The amides and esters of piperic acid have a synergistic action when mixed with pyrethrins; tetrahydrofurfuryl piperate was the most active synergist among the esters. Piperic acid itself was nontoxic. M. E. Synerholm, A. Hartzell and J. M. Arthur. *Contrib. Boyce Thompson Inst.* 13, 433-42 (1945).

#### Derris Diluents

Tests of mixtures of 3 parts by weight of various diluents to 1 part of derris containing 5 per cent of rotenone, showed that the toxicity of derris dust to the housefly is influenced greatly by the kind of carrier or diluent used. The percentage killed with some of the diluents tested was as follows: precipitated sulfur 93.5 per cent, cupric sulfide 90.9, dusting sulfur 89.5, sodium chloride 85.4, talc 41.0, paraformaldehyde 33.3, calcium carbonate 22.8, kaolin 11.6, and manganese dioxide 11.5. F. E. Whitehead. *Proc. Oklahoma Acad. Sci.* 24, 27-8.

#### Fungicide

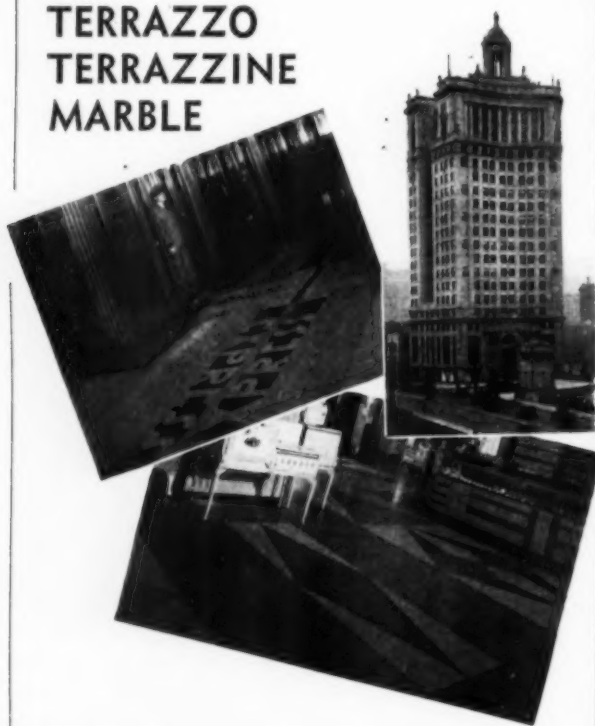
To protect materials subject to attack by fungi, they are sprayed with a liquid containing nitrogen-substituted 3-amino methyl-2(3)-benzothiazolethione. J. L. Kurlychek, to U. S. Rubber Co. U. S. Patent No. 2,358,402.

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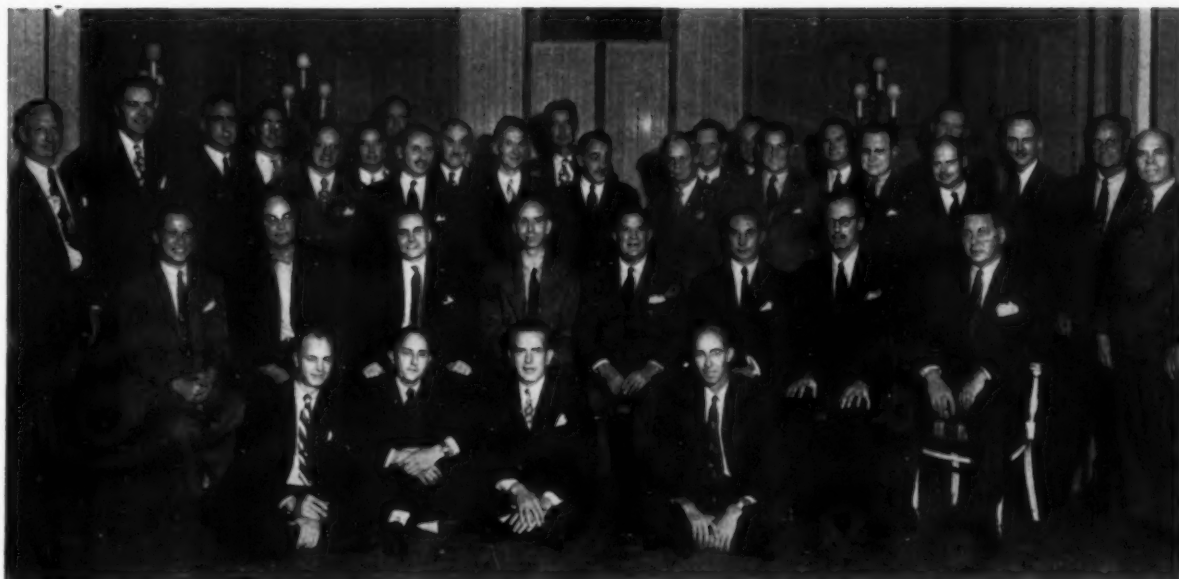


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The Kenya visitors were hosts to a group from the insecticide industry at a dinner at the Ritz Carlton Hotel, New York, July 30th.

## Pyrethrum Expansion Costly, Says Kenya Head

**J**USTIFYING the present high price for Kenya pyrethrum flowers as the result of war-time measures to expand production for military purposes, Commander Frank J. Couldrey, chief of the Kenya Pyrethrum Board who recently spent two months in the United States in the interest of post-war pyrethrum developments, stated also that 1945 production of between eight and nine thousand tons will be the largest in Kenya history. About 60,000 acres are under pyrethrum cultivation this year as against 20,000 a few years ago, of which 55,000 acres are in Kenya Colony and 5,000 in other parts of British East Africa.

Accompanying Commander Couldrey to the United States were Roger E. Norton, member of the Kenya Pyrethrum Board, Dr. E. Page, scientific advisor to the delegation, and Paul Jefferies of Mitchell Cotts & Co., Ltd., London. All returned to London the middle of August, the Kenya delegation en route to East Africa. During their stay in the United States, the delegation made its headquarters with

the Greene Trading Co., New York, of which George Nixon is head.

Much of the added pyrethrum acreage in Kenya during the past few years was of necessity planted in areas not best suited for pyrethrum, stated Commander Couldrey, and was put into production solely to supply expanded military requirements. Since the war, costs of production have risen and pyrethrum growers have been forced to pay greatly increased wages and to use land in competition with much-needed foodstuffs production. It has been only by paying the farmers a higher price for pyrethrum to cover higher growing costs that they have been encouraged to produce the flowers instead of foodstuffs. In short, pyrethrum growing has been in direct competition with high prices in other agricultural products in Kenya. At lower prices, pyrethrum tonnage instead of increasing during the past few years would undoubtedly have declined. The price of pyrethrum flowers at present is 32½¢ per pound c.i.f. American ports for flowers testing 1.3

per cent pyrethrins (adjustable up or down on this basis) at which figure the price is fixed for the balance of 1945, 1946 and 1947 based on a guarantee to the Kenya growers. He further stated that he saw no likelihood of any substantial reduction in future costs of production.

Asked a number of questions regarding the post-war world possibilities in pyrethrum growing and processing, Commander Couldrey stated that Japan might eventually again become a factor in pyrethrum. If the Japanese war machine and industry are destroyed and forbidden to rebuild, Japan may again become an agricultural nation. In a desire to obtain dollar exchange and other foreign balances, pyrethrum growing for export might develop. At the same time, he noted that the Japanese would have to improve their quality far above what it used to be in order to compete with Kenya flowers. He also expressed the belief that the Japs might cut their prices to the consumer by subsidies in order to interest outside buyers in the post-war world.

(Turn to Page 147)





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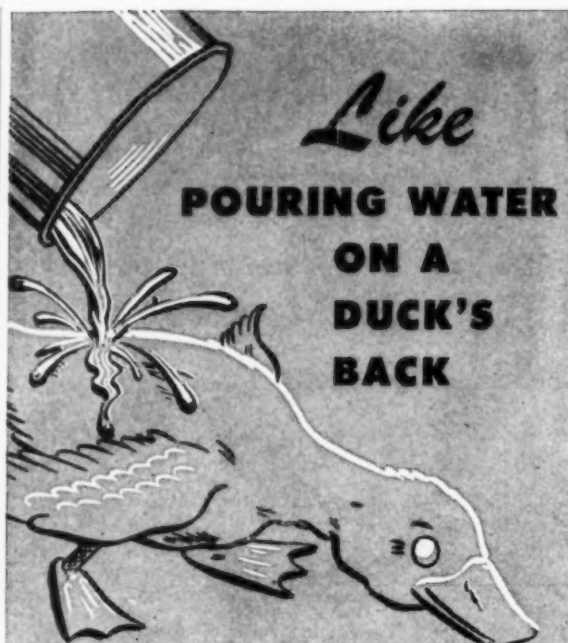
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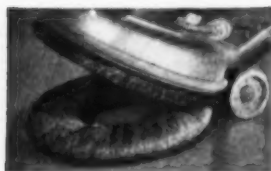
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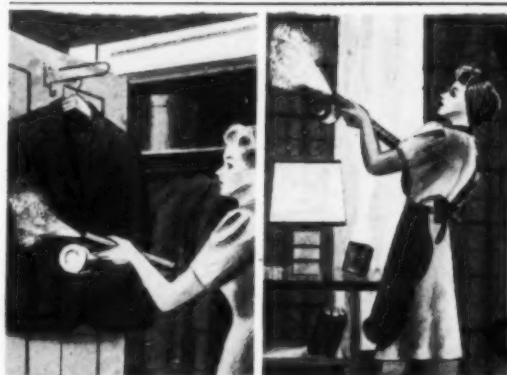
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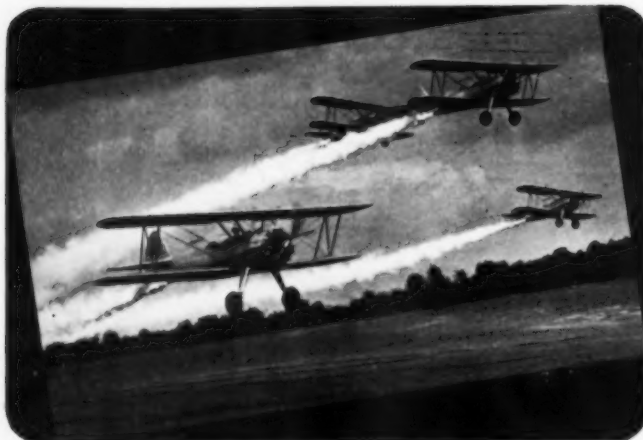
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Richardson Agencies, Ltd.

### Employees Buy Supply Firm

Former employees of Janitors Supply Co., Cincinnati, have purchased the business from the estate of the late John H. Menkhaus, it was learned recently. E. Howard Wigger is now president of the company.

### Joseph Powell Dies

Joseph Powell, father of John Powell of John Powell & Co., New York, and a well known collector and shipper of domestic botanical drugs some years ago, died August 4 at Staunton, Va. He was 78 years of age. Joseph Powell who for some years engaged in collecting drugs in the mountain regions of Virginia, Tennessee and North Carolina, shipped to the New York and other markets from Bristol, Va. and Asheville, N. C. In addition to John Powell, he is survived by his wife and two sons, Ray and Joseph, Jr. Burial was on August 8 in the Immaculate Conception Cemetery at Montclair, N. J.

### Lyk Nu Co. Buys Factory

Al Banks, president of Lyk Nu Co., New York manufacturers of "Kote-O-Wax" polishes, has purchased the two-story factory building at 279 and 281 E. 139th St., New York.

### Col. Aryault Rejoins Fed. Varnish

Lt. Col. John Aryault, U.S.M.C., who, before being called into active service in the Marine Corps three and one-half years ago, was plant manager of Federal Varnish Co., Chicago, for a number of years, returns shortly as production and plant manager, the company announced recently. Col. Aryault was called into active service in the Marine Corps on Mar. 15, 1942, after nearly 20 years' service in the Marine Corps Reserve as a Captain. His first assignment as the first chief of the Experimental Section of the Marine Corps Equipment Board, located at Quantico, Va., enabled him to become familiar with the new im-

plements of modern warfare as well as to lend technical assistance in the organization of this Marine Corps development center. Early in 1944, Col.



Major General Keller E. Rocky, Commanding Officer of the Fifth Marine Division, pins the Bronze Star on Lt. Col. Ayrault.

Ayrault, as a Major, was assigned to the 5th Marine Division, at that time being organized for combat duty overseas. As commanding officer of the Headquarters Battalion of the 5th Marine Division, which command carries with it the responsibilities of Division Provost Marshal and Headquarters Commandant, Col. Ayrault served with the division from its activation, through the training phases and landed with it early on D-Day, Feb. 19, 1945, on Iwo Jima. For his part in this landing Col. Ayrault received the Bronze Star Medal.

### Milo Starts New Firm

Jack Milo of Birmingham, Ala., has established the House of Milo with headquarters in that city to distribute sanitary supplies and allied products through the South and Southwest. He announces that he will carry stocks in Birmingham, Dallas, San Antonio, and New Orleans. Prior to forming his own firm, Mr. Milo was a representative for Hysan Products Co., Chicago, for five years and prior to that was associated with the Pioneer Manufacturing Co., Cleveland.

### New Navy Mosquito Repellent

A new, and considerably improved mosquito repellent that is said to be effective on the skin up to 11

hours was reported last month by the Navy Bureau of Medicine and Surgery, Washington, D. C. The formula for this new product is said to have been evolved at the Naval Medical Research Institute, Washington, after nearly two years' work and more than 2,000 compounds had been tried, the bureau stated. The new repellent is called NMRI-201 because it represents the 201st compound tried this year. It is a liquid, slightly thicker than water, practically odorless and colorless.

### Sanitary Supply Man Honored

Lt. Col. Theodore J. Pick, who for the past 10 years has been sales manager of Janitors Supply House, Baltimore, was awarded the Bronze Oak-Leaf Cluster to the Legion of Merit by headquarters of the European Theatre of Operations, the company announced recently. Col. Pick was superintendent of the water division of the U. S. Army Transportation Corps of several foreign ports. It was for his efforts in this capacity that he received his citation.

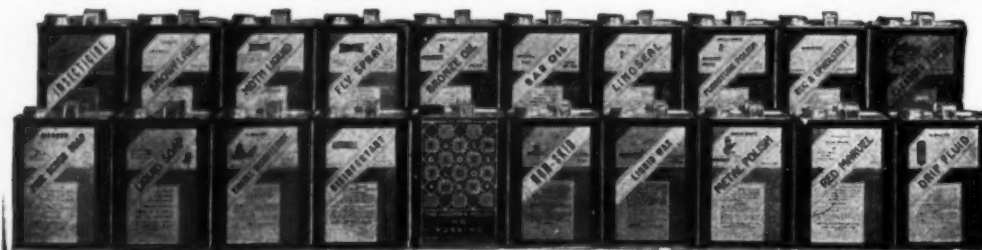
### Wood Builds New Plant

G. H. Wood & Co., Toronto, Ontario, Canada, are building a new plant in Vancouver, British Columbia, which will occupy a whole block between Victoria and Salisbury Drives, it was learned recently. The company, which manufactures sanitation supplies, surgical soaps, disinfectants, etc., made a large variety of similar products for the Army and Navy. The expansion is for post-war supply trade, locally, and for export. J. M. Adolph is western manager. The company has 23 branches throughout Canada.

### Velsicol Advances Helies

Velsicol Corp., Chicago, recently announced the appointment of Wallace F. Helies as assistant sales manager in charge of sales research and marketing. He has been with Velsicol since Oct., 1944, and before that was associated with Standard Oil Co. of New Jersey's chemical products division. The company also announced the opening of a Detroit office, which will be under the direction of Gus J. Mayer.

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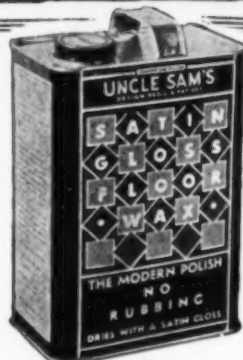
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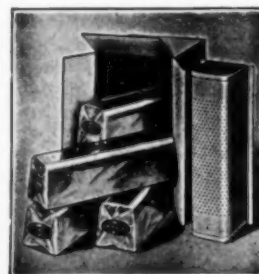


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#### PCO Directors to Meet Oct. 22-24

Although it has definitely called off its convention for 1945, notwithstanding the end of the war with Japan, the National Pest Control Association will have a meeting of its board of directors in Cincinnati at the Netherland Plaza Hotel, Monday, Tuesday and Wednesday, Oct. 22-24. In addition to directors, the Association is planning to have the chairmen of the following committees attend: Legislative, Rodent Control, Research, Bids and Specification, Termite Control and Fumigation. A summary of the directors' discussions will be submitted to the membership following the meeting. Advance indications are that such subjects as post war problems, rehabilitation, chemicals and overall business matter will be discussed. In view of the fact that there is to be no convention in 1945, the board of directors have recommended that all officers and directors of the Association automatically have their terms carry over for another year. A vote by mail of the membership regarding this proposal is being solicited by the secretary. A vote by mail is also being taken to elect a successor to fill the unexpired term of the late Max Rukin. The membership is also being asked to vote of their choice of a 1946 convention city. Since New Orleans or Cincinnati were being considered for the 1945 convention members are being asked to consider these cities for next year's meeting.

#### New Anchor Radio Show

Anchor Hocking Glass Corp., Lancaster, O., announced recently that they are replacing their sponsorship of the "Meet Corliss Archer" radio program with "Hobby Lobby," effective Thursday, Aug. 30, at 9:30 p.m. It is to be heard over the complete CBS network.

#### Expand Ethanolamines Production

Larger facilities for the production of monoethanolamine and diethanolamine have just been completed by Carbide and Carbon Chemicals Corp., a unit of Union Carbide and Carbon Corp., New York, the com-

pany announced Aug. 11. A new production unit is now in operation to meet the increasing demands on these two amines for chemical uses, emulsifying agents, etc.

#### Brenn 25 Years at Huntington

J. L. Brenn, president of the Huntington Laboratories, Huntington, Indiana, completed 25 years service



J. L. BRENN

with that company on August 15. A banquet to signalize the occasion was given to Mr. Brenn by seventy employees of Huntington Laboratories at LaFontaine Hotel, Huntington, on that evening at which he was presented with a silver tray engraved with the names of all company employees. W. R. Anderson who likewise has served 25 years with the company presented the gift. Hurley Feltman whose service record exceeds 23 years acted as toastmaster. Watches were presented during the course of the evening by Mr. Brenn to Mr. Anderson and to Frank Friedman and George Haite, also 25 year men. A brief service was also held in memory of those who gave their lives in the service. Brief addresses were also made by Lucille Ufheil and Earl Brenn.

#### U.S.I. Elects Young a V.P.

Bracebridge H. Young, secretary of U. S. Industrial Chemicals, Inc., New York, has been elected vice-president and secretary of the company, it was announced late last month. Mr. Young has been with USI for 20 years, and has been an officer of the firm since 1937.

#### Prentiss Move Offices Oct. 1

R. J. Prentiss & Co., New York, will move their main offices about October 1 to 110 William St., New York. They are at present located at 80 John St. The new offices will give the company one hundred per cent increase in floor space. Prentiss plants are located in Brooklyn and Newark, N. J. The Newark plant which was recently acquired by the company comprises a five acre tract with deep water dockage and rail sidings and 85,000 square feet of factory floor space.

#### Tells Container Outlook

In a war's-end statement, D. W. Figgis, president of American Can Co., New York, pointed out that his company's 67 plants, now producing containers at the highest rate in the company's history, can divert their output almost immediately into civilian channels. Reduction of the use of steel for war purposes and the freeing of the tin supply in the South Pacific are expected to have an immediate effect on postwar operations, according to Mr. Figgis. In addition, although it may be some time before tin shipments can be resumed from the Malay States, it seems likely that with the end of the war the withdrawal of a larger amount of tin reserves now in the stockpile may be permitted. Research during the war years, it was pointed out, has enabled the company to effect great savings in the use of tin, which will permit the maximum utilization of stocks now on hand. American Can's president further pointed out that since most of its war time production was its regular product; cans, there would be no important plant conversion problem.

#### End Arsenic Allocation

Controls on the allocation of arsenic were removed by the War Production Board on August 14. WPB officials indicated that there is an adequate supply of arsenic available in the western hemisphere to meet maximum anticipated domestic requirements. In addition, shipping lanes to Sweden, the world's largest producer of arsenic, have now been opened.

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## California Insecticide Mfrs. Honor Dr. Cox

As was mentioned in last month's issue of SOAP & SANITARY CHEMICALS, a luncheon was recently tendered Dr. Alvin J. Cox, retired chief of the Bureau of Chemistry of the California State Department of Agriculture. Those present included (standing, left to right): A. B. Lemmon, acting head of the Bureau of Chemistry of the California State Department of Agriculture; D. A. Zanette, Chipman Chemical Co.; S. P. Ochiltree, Stauffer Chemical Co.; W. D. Gray, secretary, Pacific Insecticide Institute; R. A. Lamoree, Stauffer Chemical Co.; W. W. Thomas and Leo R. Gardner, California

Spray Chemical Corp.; Alfred Fenton, Texas Gulf Sulphur Co.; R. D. Curtis, Sherwin-Williams Co. of California; Paul R. Jones, Shell Oil Co.; W. M. Delfs, Wheeler, Reynolds & Stauffer and J. L. Avery, California State Department of Agriculture; (seated, left to right), W. C. Morrison, Standard Oil Co. of California and president of the Pacific Insecticide Institute; Dr. Cox; E. T. Doyle, Tobacco By-Products & Chemical Corp.; H. C. Davies, California Spray Chemical Corp.; L. F. Stayner, Shell Oil Co. and vice-president of Pacific Insecticide Institute and A. J. Flebut, Niagara Sprayer & Chemical Co.

### Canadian San. Supplies Buys Plot

Canadian Sanitary Supplies, Ltd., Hamilton, Ontario, Canada, manufacturing chemists, recently purchased a plot of ground 100 by 220 feet on Barton St., on which it is planned to erect a 32 by 100 feet, brick-concrete block factory. The company manufactures insecticides, disinfectants, deodorants, liquid hand soap, liquid scrub soap, veterinary specialties, cleaning chemicals, hardwood floor cleaner, floor waxes of all types and furniture polishes.

### Dow Forms Merchandising Division

Sherman W. Putnam, former assistant general sales manager, has been named to head the newly formed Specialty Products Division of Dow Chemical Co., Midland, Mich., the company announced Aug. 23. The new merchandising division is expected to concentrate on small package and consumer items such as specialty insecticides, the announcement stated. Expansion of the line will depend on future developments. The new division in no way conflicts with Dow's

present bulk marketing policy as its activities will be limited to products for which no adequate means of distribution now exists, it was stated.

### McCormick Tells War-time Role

McCormick & Co., Baltimore, have recently issued a four-page folder devoted to some of their war-time manufacturing activities and a discussion of their six-point program for returning servicemen. As a part of its record of war-time achievement the McCormick folder shows its six production awards for production of material ranging from DDT insecticides to food products.

### WPB Ends Most Chemical Controls

The War Production Board announced recently that the September report on the distribution of chemicals for civilian use under allocation orders governed by the Chemicals Bureau would be the last one. This will close three years of continuous reporting of chemical distribution to industry, WPB stated. It further pointed out that most of the orders administered by

the Chemicals Bureau were revoked effective Aug. 31 and in all probability the remaining orders will be revoked Sept. 30. Even if a few orders should be retained, they will not be of sufficient importance to warrant special reports, WPB said.

### Cuprinol Appoints von Goehde

Dr. H. L. von Goehde, was appointed to succeed Dr. Oscar C. Brauner as chief chemist of Cuprinol, Inc., Boston, it was learned recently. Dr. von Goehde, a graduate of the Bavarian Academy of Science, where he took his Ph.D. in 1911, was president of von Goehde Laboratories, Inc., and held a similar position with Montgomery-von Goehde Corp., before joining with Cuprinol. He has done chemical research on disinfectants, soil solvents and chemurgic problems and in 1936 wrote a textbook on disinfectants. In 1929-30 Dr. von Goehde was a United States member of the German-Austrian Claims Commission.

### Markets New Insecticide

Athelstan Products Co., Minneapolis, is now marketing a new insecticide known as "G T A Powdered Insecticide." The powder is said to be slow in its action and for maximum efficiency should be blown behind loosened baseboard and door casings.

### Proctor Gateway Vice President

J. T. Proctor was recently named vice-president in charge of sales of Gateway Chemical Co., Kansas City, Mo.



# ATTENTION JOBBERS

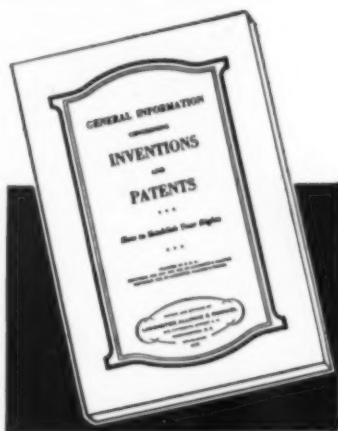
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## KENYA GROWERS IN U. S.

(From Page 133)

Pyrethrum growing in India has been conducted on a comparatively small scale and has supplied chiefly the home market and is likely to continue to do so. The possibilities of cheap Chinese pyrethrum in the post-war world, he discounted as also production mainly for home use. In Brazil and the Argentine he saw a continuation of pyrethrum growing but not the ability to produce and sell high grade flowers of Kenya quality or any flowers at prices proportionately lower than Kenya prices. In the Belgian Congo and other parts of Africa, he held, present production is likely to continue as it is today. Large scale pyrethrum farming in the United States, facing extremely high cost farm labor, is not a competitive commercial possibility under present conditions of hand picking.

Asked about the possibilities of producing concentrated pyrethrum extracts in Kenya and shipping extracts in place of the present method of baling and shipping the flowers, Commander Couldrey stated that such a possibility had naturally been considered for some time by the Kenya Board. Although no plan for extract production in Africa by the Pyrethrum Board is in immediate prospect, savings in freight space and costs had always warranted consideration of the idea. In fact, any means which under necessary circumstances would permit a more economic production and distribution of pyrethrum, Commander Couldrey said, are viewed as possible of adoption in Kenya.

**B**ELIEF that plans to produce pyrethrum extracts in Kenya to be shipped instead of baled flowers are further along than is generally known has been expressed by some American pyrethrum processors. Further, they state, two or more American companies are considering establishing pyrethrum extract plants in Kenya. This turn of events, it is said, might force other pyrethrum processors to turn back to Japan for flowers, or to encourage and finance an expansion of pyrethrum growing not only in Japan, but in Brazil, the Argentine, and possibly Mexico.—The Editor.

## CARNAUBA WAX

(From Page 115)

established importers who have dealt in it for years? Any answer to that is simply conjecture, and I would have no proof. I'm not in a position to secure proof.

I do not say this is the case, but it might possibly be that a Brazilian corporation could buy carnauba wax and not be bound by the price ceilings applicable to U. S. purchases. Should that Brazilian corporation, however, choose to sell the wax at the established U. S. ceilings, there is nothing in the world that should prevent them from taking a loss. That, of course, is their own business. Again, if that Brazilian corporation might be a subsidiary or a wholly owned company operating as a subsidiary of a United States company, would it make much difference whether the loss was taken by the Brazilian corporation or by the United States corporation? At any rate, the United States corporation would get all of the carnauba wax that they wanted and needed and possibly more, to the exclusion of the distribution of this product among the regular established users of carnauba wax.

*It is exactly four months since we have been able to get any importer or dealer to accept a contract for carnauba wax for shipment at any time or at any agreed price. In fact we have not been able to buy any carnauba wax under any circumstances and we are practically out of the wax business. It does make a fellow wonder what is going on when we read in the import statistics that so and so has received a shipment of 3500 bags or that some previously unknown person in the wax business in New Orleans has received a large shipment.*

*So, medium size manufacturers like ourselves are not only not getting adequate stocks but they're just not getting any wax . . . period. What to do about it I don't know but I still am not in favor of putting any pressure on the OPA to remove price restrictions which would allow the Bra-*

*zilians to gouge us for our requirements. Rather than do that I would quit making floor wax altogether or else switch to substitute material which we can sell to our customers with frank explanations of the circumstances and keep on selling it that way until the wax producers, shippers and importers realize that their market for carnauba wax is in danger of being permanently destroyed.*

\* \* \*

Like other consumers, we have found it practically impossible to purchase carnauba wax in recent months. There have been many rumors concerning the fact that several large consumers have been getting most of the carnauba that has recently been received in New York. However, documentary proof that these purchases have been made at any other than legal ceiling prices is lacking.

A change in OPA price ceilings might or might not prove to be a permanent aid to those who are short of carnauba wax. The same situation that now prevails might prevail at almost any price level. A complete removal of ceiling prices would undoubtedly result in a runaway market and an inevitable future crash in the market which might wreck a lot of firms holding high priced inventories.

We believe that it would be well for the f.o.b. Brazilian prices to be removed from Price Schedule 264 so long as the total cost to the consumer-importer is held to present f.o.b. New York resale prices. Perhaps this might result in consumers finding some way to secure more wax in competition with foreign buyers. In case this change and future developments do not ease the situation for consumers within the next six to eight weeks, then we would be inclined to review the situation at that time to see if a reasonable increase in f.o.b. New York prices might help the situation.

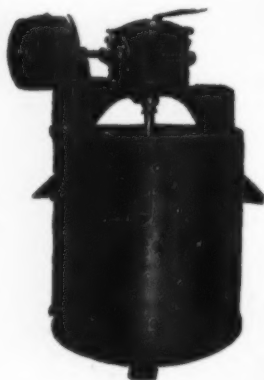
## INSECTICIDE RESEARCH

(From Page 123)

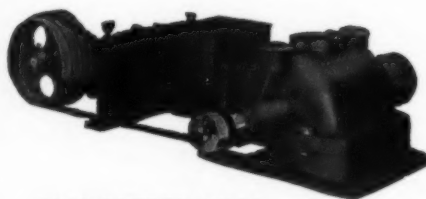
to view the term "Specificity of action" in a different light, as far as contact poisons are concerned.

"In conclusion a brief remark; pyrethrins and rotenone, as well as all natural insecticides as opposed to the much more stable synthetic contact insecticides mentioned, are destroyed within a short time when exposed to oxidation and light. Nature does, and must do this, for, what a catastrophe would arise if the natural insecticides were stable! Nature is based on Life not Death! What tremendous imagination and means are at her disposal to attain certain definite purposes. This makes the deepest impression on us again and again."

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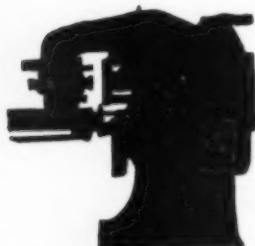
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## Free Advts. for Veterans

As a service to veterans seeking jobs in the soap, chemical, detergent and sanitary industry, *Soap & Sanitary Chemicals* will accept, without charge, classified advertising from World War II veterans seeking positions. Advertisements should reach this magazine before the 21st of the month preceding month of publication, and should include all essential information. Send them to *Soap & Sanitary Chemicals*, 254 West 31 St., New York 1, N. Y.

## Positions Wanted

**General Sales** and advertising manager with enviable record in marketing wide variety of household products nationally, available to reliable manufacturer, minimum income requirement \$10,000 commission basis preferred or will take over exclusive sales rights nationally or sectionally of meritorious products and finance high calibre sales organization. Confidential. Address Box No. 174, care of *Soap & Sanitary Chemicals*.

**Entomologist** — Man with long experience in formulating, manufacturing, and testing insecticide materials desires connection with small progressive company where he will have opportunity to engage in technical sales work. Address Box No. 178, care of *Soap & Sanitary Chemicals*.

**Insecticide Expert** — Man with ten years intensive experience in insecticide and disinfectants as independent consultant, with experience in DDT dating back to January 1943, and also extensive work with its use in the tropics, desires connection with insecticide manufacturer, preferably in sales work. At present a captain in U. S. Sanitary Corps, anticipating early release. Address replies to Box No. 185, care of *Soap & Sanitary Chemicals*.

**Chemist:** College graduate, 27 years old. Formerly employed by large general testing laboratory. Experienced in chemical and biological testing, control and formulation of sanitary chemicals, personal products, vitamins and cosmetics. Address Box 191, care of *Soap & Sanitary Chemicals*.

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AROMATIC CHEMICALS  
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FACTORIES  
FARMINGDALE, L. I., N. Y. NYACK, N. Y.

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They have good fastness to alkali, light, tin, ageing.

The following shades are already available:

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for testing samples.*

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WIZO RAT GLUE can be obtained separately for preparing your own boards.

*Write for catalog and prices on complete line of Deodorants and Insecticides.*

### ELKAY PRODUCTS CO.

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**Chemist, Analytical, Veteran 27.** 3½ years experience analyses miscellaneous government supplies (soap, paint, waxes, rubber, petroleum products, alloys, etc.) Can set up and supervise six-man laboratory. Some short-term research. Available October 15. Any location. Address Box No. 186, care of *Soap & Sanitary Chemicals*.

**Manufacturing And Research Chemist.** Graduate chemical engineer, 20 years successful experience, soaps, alkalies, detergents and allied chemical products. Age 42. Available for executive position with opportunity to share profits. Address Box No. 190, care of *Soap & Sanitary Chemicals*.

## Miscellaneous

**Will Purchase Immediately — Pneumatic Packaging Machine.** used for chips, powder, cleanser; also dry mixers, chip dryers, crutchers, and automatic soap press. Address Box No. 189, care of *Soap & Sanitary Chemicals*.

**Product Wanted**—If you have a real item which you want distributed in the Solid South to janitor supply houses, department stores and hardware stores, advise fully. We have the customers and the money. Address Box No. 172, care of *Soap & Sanitary Chemicals*.

**Central Pennsylvania Janitor Supply** and sanitary chemicals firm desires exclusive distribution franchise on nationally advertised products. Principal outlets, schools, municipalities, industrials, etc. Address Box No. 179, care of *Soap & Sanitary Chemicals*.

**For Sale** — 10" Jumbo Plodder; Filters; Pumps; Fillers; Labelers; Mixers; etc. Your surplus equipment wanted. Brill Equipment Company, 225 West 34th Street, New York 1, N. Y.

**Wanted** — Tin mouth sprayers, any quality. Turn your surplus stock into cash. Address Box No. 180, care of *Soap & Sanitary Chemicals*.

**For Sale** — Genuine pyrethrum fly spray "AA" grade. 60c gallon for 2,000 cases, 6 x 1 gallon cans each. Smaller quantities 70c gallon. FOB Springfield, Illinois. Wire or Phone. Chemical Service Company, 84 Beaver Street, New York 5, N. Y. Hanover 2-6970.

**Wanted** — A Zeiss Refractometer with Butyro scale. Send details with price to E. F. Drew & Co., Inc., 15 East 26th Street, New York 10, N. Y. Att: Purchasing Dept.

**Wanted:** Paste hand soap dispenser—patents or rights. National Soap Service, 10210 La Salle Ave., Los Angeles 44, California.

**We Are Interested** in contacting manufacturers of janitor supplies and building maintenance line. Travel three men one hundred mile radius Wichita Falls, Texas. Send us your catalog with jobbers prices. Address Box No. 184, care of *Soap & Sanitary Chemicals*.

**For Sale:** Three Roll water cooled Mills, 12" x 30" and 16" x 40". 11—Closed stainless steel tanks, 268 gals. each. National Acme Model C20, stainless steel Centrifuges. 800 ft. Ball Bearing Roller Conveyor, 12" and 15" widths. Soap Frames; Cutting Tables; Plodders; Stone Mills; Dryers; Chippers; Mixers; Powder Fillers; Grinders; Filter Presses; Kettles; Pumps; etc. Send for latest Bulletin. We buy your surplus equipment for cash. Stein Equipment Co., 426 Broome St., New York 13, N. Y.



THE MARK OF QUALITY

PALE WOOD

# ROSINS

They will help  
the soapmaker  
"stretch" his fats.

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PICAYUNE, MISSISSIPPI

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A New Dry Quaternary Ammonium Salt for general Disinfectant Use and Sterilizing.

Supplied only to manufacturers for compounding into disinfectants, germicides, etc.

- Powerful—Colorless—Odorless.
- High Phenol Coefficient—F. D. A. procedure.
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- A Cationic Compound — an Emulsifier — Wetting Agent — Disinfectant — Germicidal.
- A PURE CHEMICAL PRODUCT—Not a mixture.

Plan now to use "Ethyl Cetab" in your post-war products.

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JENKINTOWN, PENNA.

"Ethyl Cetab" is our trade name for Pure Cetyl Dimethyl Ethyl Ammonium Bromide.

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**SAFETY HAND SOAP**

(Powdered)

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- ★ Non-abrasive, vegetable oil base
- ★ Soothing with fine after-effect
- ★ Tested and approved by millions of safe washups in plants throughout the country
- ★ Unsurpassed quality and value
- ★ Free samples available for established jobbers

Other items in the Skotch Products line include dish-washing compounds, medium and heavy duty cleaners, liquid soap concentrate, special formula compounds and powdered soap dispensers.

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Insecticides  
are Sprayed  
with  
the *Motorized*

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## INDUSTRIAL PLANTS, MFG. DIVISIONS, UNITS

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"Wake up quick, Cuthbert! De war's ober!"

## Dream's End!

**W**ITH the war over, the salesman's dream is ended . . . not too far ahead is the end of the road of easy selling . . . of fat juicy orders at top prices coming in over the transom . . . the end of the sellers' market . . . salesmen will again soon mount their fiery steeds and away to the road . . . the days of soft orders are fast drawing to a close . . . selling is about to be revived. . .

And as an adjunct to your revived selling plans, may we point out the important and valuable part which business paper advertising has played in the past . . . if you would resume sales efforts in the field of soap products, cleansers, insecticides, and allied chemical specialties, may we suggest early consideration of advertising in

**SOAP and Sanitary Chemicals**  
254 WEST 31st STREET NEW YORK 1

*Member Audit Bureau of Circulations*

## Tale Ends

**A** THOUSAND women fought and tussled in a wild scramble for soap in a Miami, Fla., grocery store last month just a day or two prior to the end of the war. The store owner advertised that he had soap chips for sale,—and paid the penalty by having his store wrecked. Whoever started this "weaker sex" rumor anyway?

\* \* \*

Screamed the newspapers last month: "Over 3,000,000 pounds of butter, held in storage by WFA and allowed to spoil, goes to make soap." Investigation reported that the spoilage was only a fraction of a per cent of this figure.

\* \* \*

But if USDA hangs on to that 100,000,000 lb. stock pile of coconut oil much longer and the ffa climbs well up into two figures, there is likely to be a little hell to pay. And there should be. Valid reasons to hang onto it *en toto* have expired.

\* \* \*

With pyrethrum now as free as the evening breeze, with the DDT requirements of the armed forces cut sharply, with rotenone unhampered by WPB control, who and what are going to get the insecticide business? For the best quick answer, a large slice of squash pie will be awarded.

\* \* \*

What are the dimensions of a drum of solid caustic soda? Ask some of the alkali manufacturers. A New York soap plant engineer did this on the phone and the first three he called didn't know. The fourth gave him the answer.

\* \* \*

Said a leading supplier of pyrethrum and DDT compounds to the trade last week: "The Government has cancelled all of its contracts with us and we don't even miss the business." This is only one effect which the release of DDT has had on insecticides of late.

